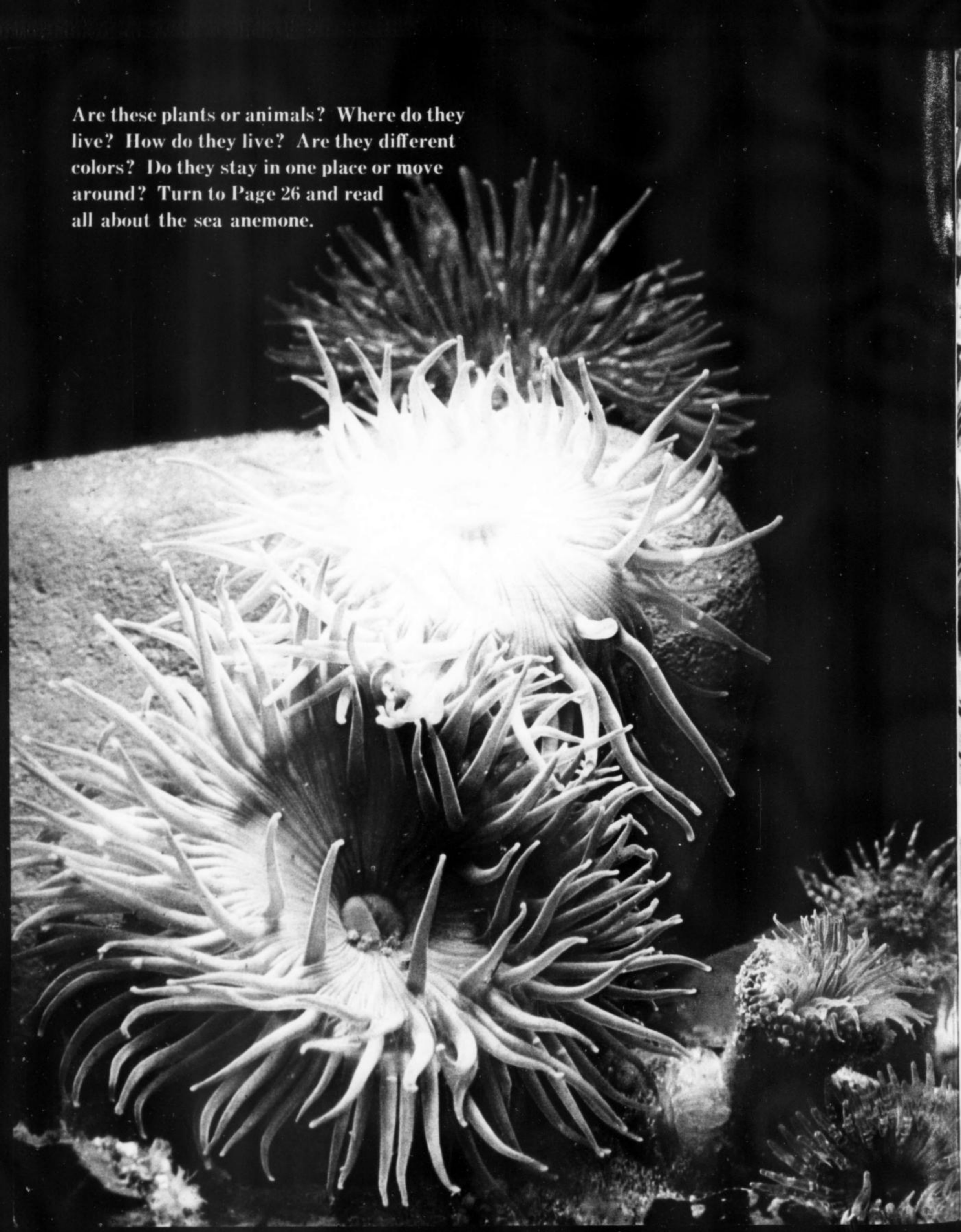
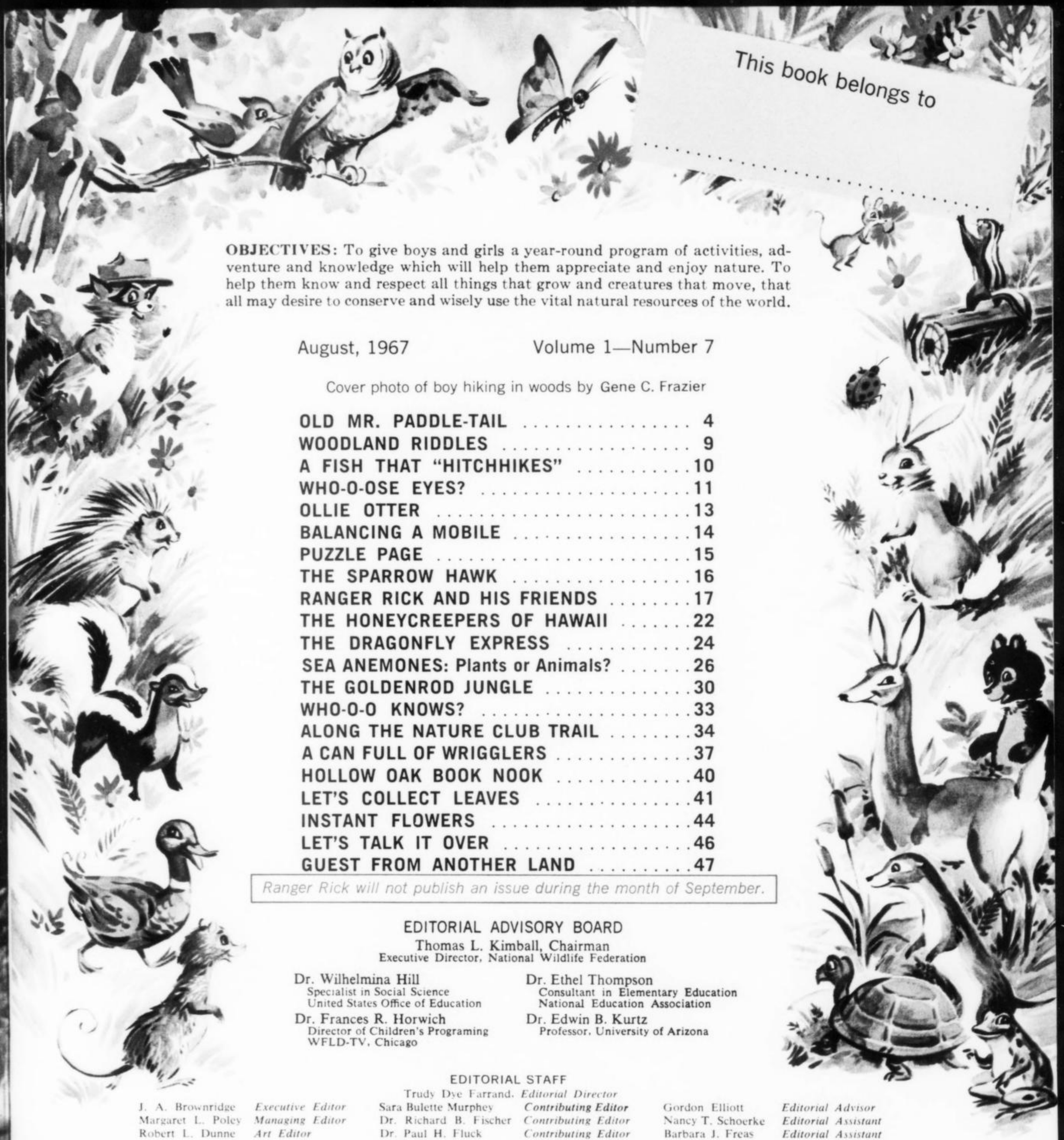
Ranger Rick's nature magazine

August, 1967

PUBLISHED BY THE NATIONAL WILDLIFE FEDERATION

Are these plants or animals? Where do they live? How do they live? Are they different colors? Do they stay in one place or move around? Turn to Page 26 and read all about the sea anemone.





This book belongs to .....

OBJECTIVES: To give boys and girls a year-round program of activities, adventure and knowledge which will help them appreciate and enjoy nature. To help them know and respect all things that grow and creatures that move, that all may desire to conserve and wisely use the vital natural resources of the world.

August, 1967 Volume 1—Number 7

Cover photo of boy hiking in woods by Gene C. Frazier

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Ranger Rick will not publish an issue during the month of September.

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OLD MR. PADDLE-TAIL

by Keith G. Hay

Did you ever wonder how busy beavers really are? Or if they can cut down a tree and make it fall where they want? And why people call them nature's engineers?

If you go hiking this summer along a stream or pond, you may find the home of old paddle-tail and get your own answers.

Old Mr. Paddle-tail lives in an interesting world. He is one animal that changes his surroundings to suit himself. He builds a large house called a lodge. He also builds underground dens, dams, tunnels and canals where he neatly stores a supply of food for winter.

Sit down by a beaver pond and take a close look at Mr. Beaver and the world in which he lives. If you watch him you can tell that he loves water. Nature has equipped him in many ways to live in it. He can close his ears and nose under water. If he wants to chew on a log under water, he simply closes his lips behind his powerful front teeth and "chomps" away.

Paddle-tail gets his nickname from his large, flat tail that is covered with leathery scales. He uses his tail to swim, to slap the water when he is alarmed and to sit on while gnawing a tree. He never uses it

Please turn the page

Photo courtesy of U.S. Fish and Wildlife Service

Photo by William Ratcliffe

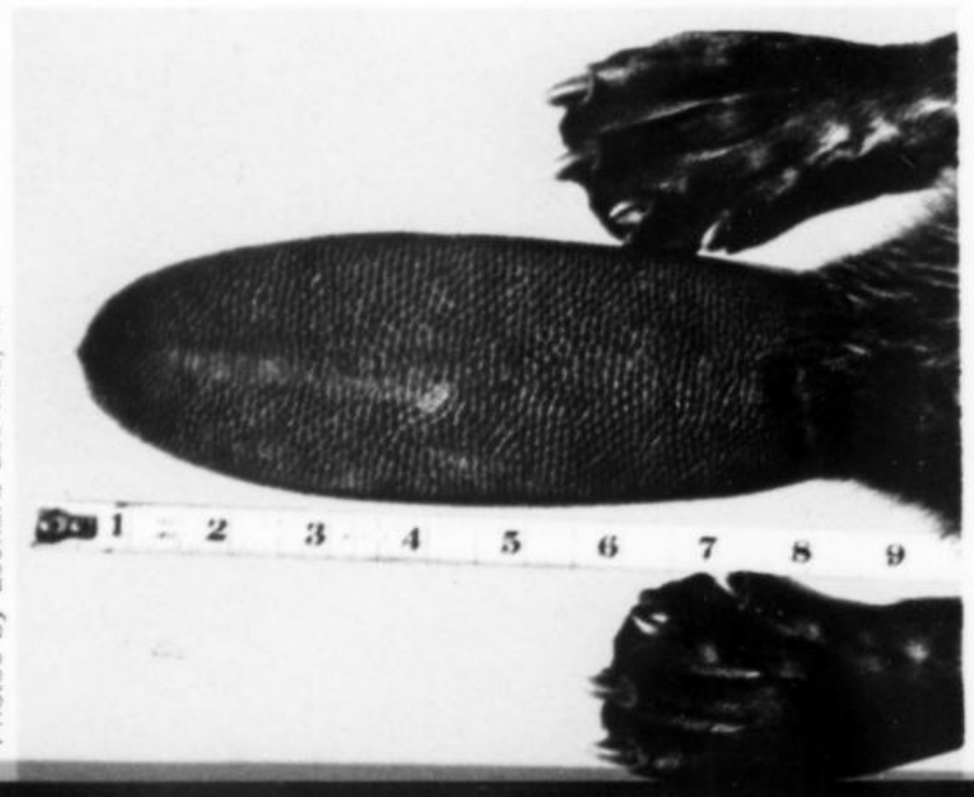
The geese at the left have made a home on top of a deserted beaver lodge where they will raise their family. Above, Old Mr. Paddle-tail cuts a tree and eats the bark.

as a tool to plaster mud on his lodge or dam as many people think. This work is done largely by his front feet, which he uses as we use our hands. The back feet are large and webbed, just like a duck's.

A beaver has two layers of fur. The underfur is very soft and dense. Over this fur are long coarse guard hairs. When he is in water, only the outer layer of hair gets wet. His underfur and skin stay warm and dry.

He is often called a "busybody," but he really isn't. Throughout the long winter months and during the spring and most of the summer, he's quite lazy. He spends most of his time just eating and resting.

The beaver uses his huge front teeth to chip away the wood to fell a tree. His hind feet are webbed like a duck's which make him a powerful swimmer. His long tail is covered with leathery scales.



Photos by Leonard Lee Rue, III

The beaver's dam looks like a tangle of sticks, stones and mud, but it provides water, food and homes for other wildlife after the beavers move on.

Unless one of his dams breaks or his house caves in, the beaver makes only minor repairs on them until fall.

But when the crisp chill in the air tells him that winter is just ahead, the busy beaver lives up to his name. Beginning in the early evening, he works through the night until the morning light sends him to his lodge to rest. He is busy preparing for the long winter ahead. The main dam is built higher and stronger with mud and sticks. The lodge gets repaired and receives a fresh coat of mud.

Beavers are silent workers so don't expect to hear them "talk." No matter how crowded or earnest they may be, their work continues without a sound. But the youngsters sometimes "talk" in short, low whispers, much as a small puppy does.

The beaver never hibernates during the winter as some other animals do. This means he will need to eat every day all winter. So he stores his own food supply by cutting down small trees and floating them to the deepest part of the pond. There he carefully forces them into the mud. For weeks he continues to add to this underwater food supply until it begins

to show above the water.

During the winter, a thick layer of ice covers the pond. When he gets hungry, he swims from his lodge through an underwater passageway and grabs a branch. He carries it back to nibble off its bark. After feeding, he simply shoves it outside and in the spring the peeled logs are added to the dam.

Paddle-tail's favorite food is the inner bark of trees such as poplar, willow, birch and water plants. He is strictly a vegetarian and will eat neither fish nor flesh.

To bring food and building material back to the main pond, beavers build a system of waterways. It is much easier to float a fallen tree than to drag it, and for the beaver it is much safer. In the water he is at home, but on the land he is slow and wobbly and might become dinner for a hungry bear, bobcat or wolf.

A colony or family of beavers usually consists of a mother and father, youngsters a year old and the babies or "kits" born during the spring. What happens to last year's kits? When these youngsters reach two years of age, the parents actually drive them away to find a new home. There the young will mate and begin their own families. Often a grandma or grandpa also lives with the colony.

Notice the trees that have been cut down around the pond. They lie in every direction because beavers have no control over which way a tree will fall. Beavers have been killed by their own cut tree falling on them. But paddle-tail loves to chew, and chew he must, for his four front teeth continue to grow. They are kept short and sharp by gnawing.

Please turn the page

The inside of a lodge is sometimes four or five feet wide. Above the water level it has "sleeping shelves" where the beavers stay during the winter. Huddled together in their fur coats, they stay snug and warm. They have only to swim through an underwater tunnel to get to their food supply when the snow and ice cover the ground above.

Drawing by Chet Reneson

Mr. Paddle-tail uses his hind claws to comb his fur. His long outer guard hairs protects his thick underfur which keeps him warm and dry.

Photo by Leonard Lee Rue, III

A family of beavers can cut over 1000 trees a year. Each season they must go farther and farther to find more trees. This means building dams above and below the main pond and digging tiny canals from the edge of the ponds to new sources of food. Sometimes the floor of a valley will be covered with dams and ponds built by many families of beavers over the years.

If you discover a "beaver valley," notice the number of birds and animals there. Paddle-tail provides homes for many kinds of wildlife. Large animals such as moose, elk and deer find beavers' homes a favorite place for food and water.

Beavers often make trouble when they build a dam. Water is held back by the dams and it sometimes floods cropland and roads. Sometimes they cut valuable trees. When this happens, State Conservation Departments send trained men to trap the beavers and remove them to areas where their dam building will benefit other wildlife. The money to pay for this removal does not come from general taxes but is provided by license fees paid by hunters and fishermen.

As you watch paddle-tail and his family, see if the things you have read agree with your observations. He is one of our most interesting and intelligent animals.

The End

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WOODLAND RIDDLES

by June McLean

1. My fur is beautiful and dark.
I cut down trees and eat the bark.
I am a clever engineer;
Building dams is my career.
Who am I? _____

2. I have a coat of black and white fur.
Though I look like a cat, I do not purr.
I am gentle, nearsighted, but when in a plight,
I've a secret weapon with which I can fight.
Who am I? _____

3. I have a crazy, yodeling laugh,
That seems to make folks think I'm daft.
On land I cannot move about,
But in the water, "Fish, look out!"
Who am I? _____

4. I hang by my tail on a branch upside-down.
For my slowness of movement, I have great renown.
When I'm frightened or caught, I pretend to be dead.
I've a pouch where I put my babies to bed.
Who am I? _____

5. I wear a mask and roam at night,
Then return to my tree home when it's light.
I'm a ring-tailed rascal, but always neat.
I often wash my food before I eat.
Who am I? _____

6. High in a tree I sit in my nest.
I whistle, I never quack like the rest.
My feathers are colorful as a rainbow.
I migrate south when the cold winds blow.
Who am I? _____

Wise Old Owl has the answers on Page 33.

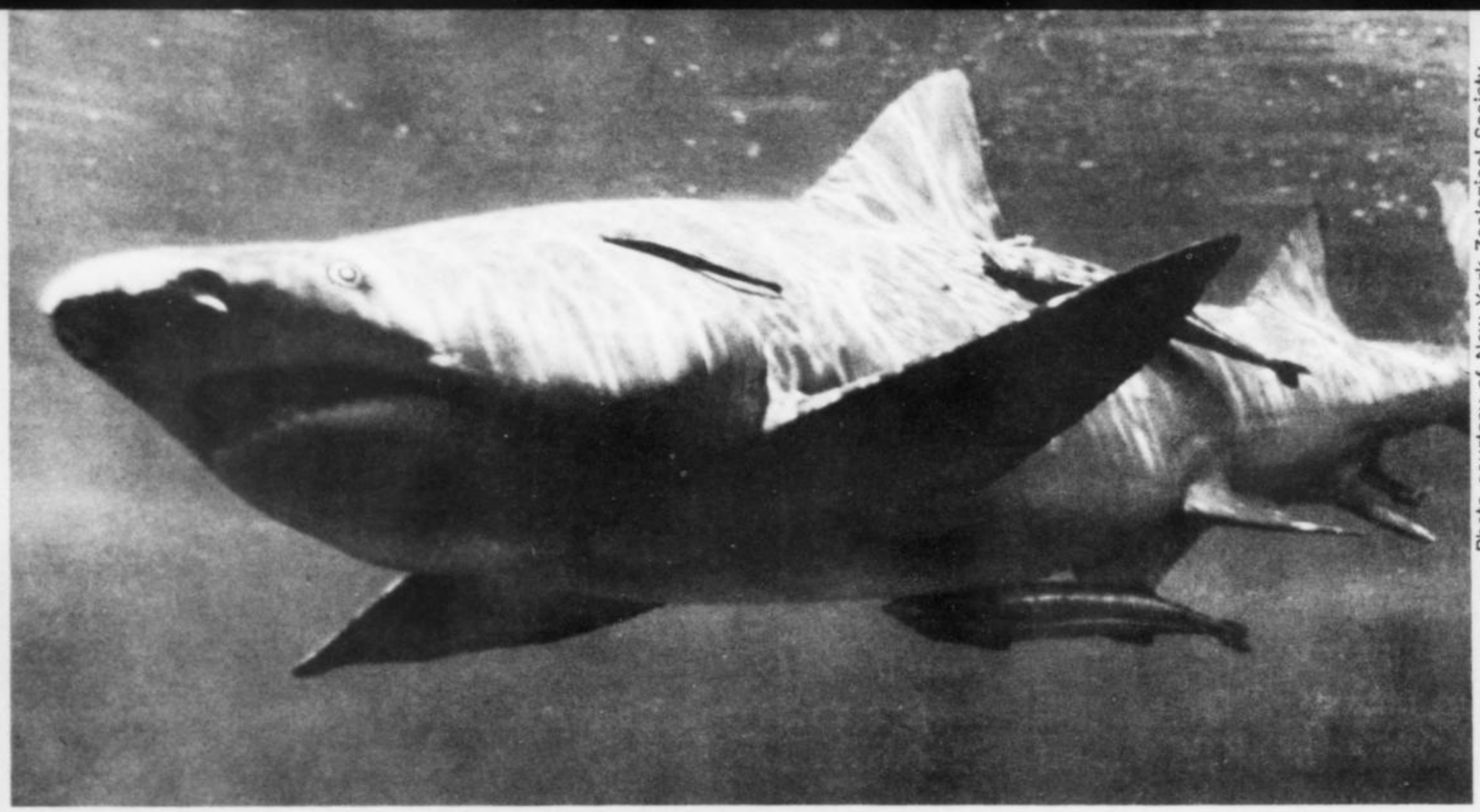


Photo courtesy of New York Zoological Society

A Fish That "Hitchhikes"

by Ivah Green

The remora (REM-oh-ruh) is a fish that *can* swim, but most of the time it "hitchhikes" a ride with a larger water animal. It is also known as "sucking fish" and "shark sucker" and is found in all tropical waters. It ranges from two inches to several feet in length.

The remora has no dorsal (back) fin as do most fish. Instead, it has a flat disk on top of its head. The disk is shaped somewhat like the sole of a shoe. It has thirteen or more bars running across it in a V-shaped pattern. These bars are like the slats of window blinds.

When there is no larger water animal in sight, the remora swims about feeding on the tiny one-celled plants and animals found everywhere in the ocean. When the remora sees a shark, a large turtle, a porpoise or a manatee, it moves close and clamps the top of its head against the animal's side. The pressure he uses causes the bars of the disk to rise slightly. They cling tightly to the animal's side (as in the photo) the way a suction cup clings when it is pressed to a smooth wall or piece of glass.

The sucking action of the disk is so strong that the shark cannot get rid of the remora. No matter how it turns or twists, the shark must keep its "passenger" until the passenger leaves by itself.

When a shark feeds on a fish, and the scraps float down, the remora may leave the shark long enough to pick up some of the pieces. Then it will return and continue its ride. Or the remora may leave the shark and clamp itself onto some other water animal swimming past.

If the remora is very small it can hitchhike another way. If a predator fish comes near to attack, the remora loosens itself from the animal to which it is fastened and swims around to that animal's mouth and slips inside it. Then with its sucker disk it presses itself tightly to the animal's gum, back of the teeth. From this safe point it cannot be dislodged. When it is ready to leave, it floats out of the animal's open mouth.

The End

1.

Who-o-ose Eyes?

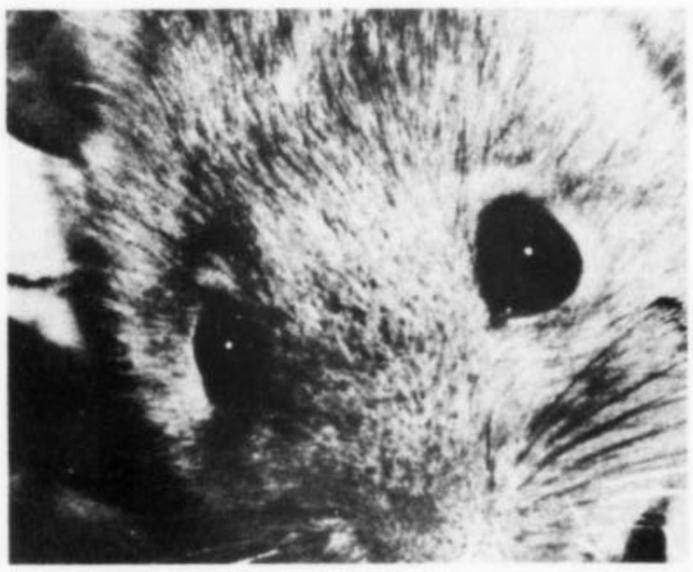
by Mary Lou Clark

Animals have many different kinds of eyes. Can you name the animals that belong to the eyes on this page? Write your answers. Then turn the page and see how well you did.

1. Who-o-ose eyes? "Mine," said the _____.

2. Swish, swish!
It's a _____.

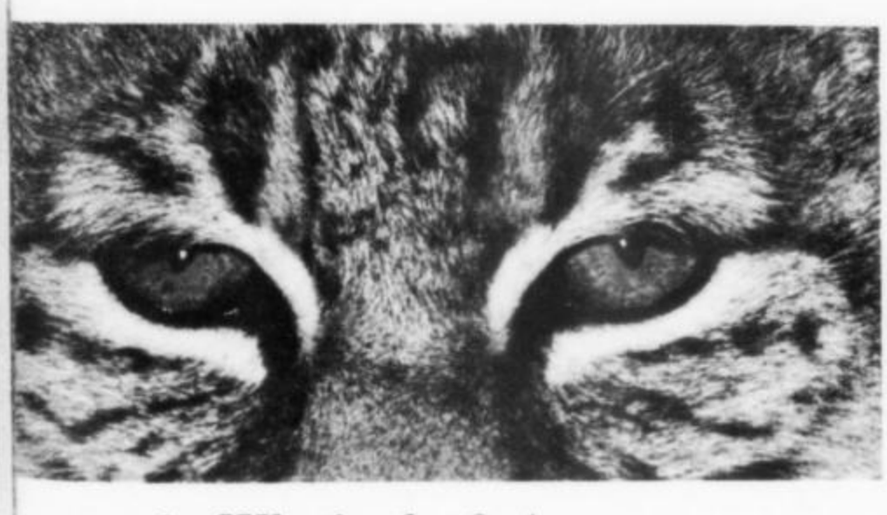
3. Try to stop her, Miss _____.



4. In the house
is a _____.

5. On a log
sits a _____.

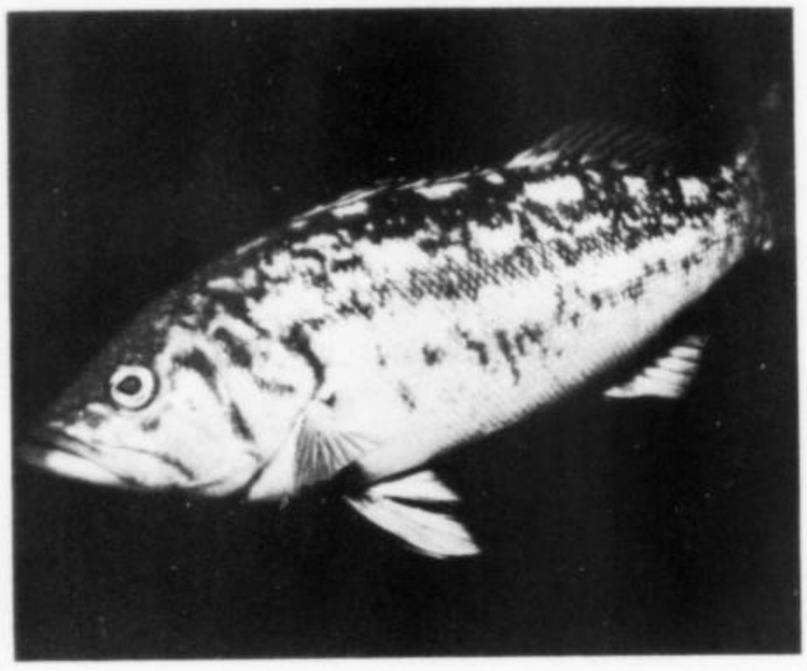
7. Often "Myrtle"
is a _____.



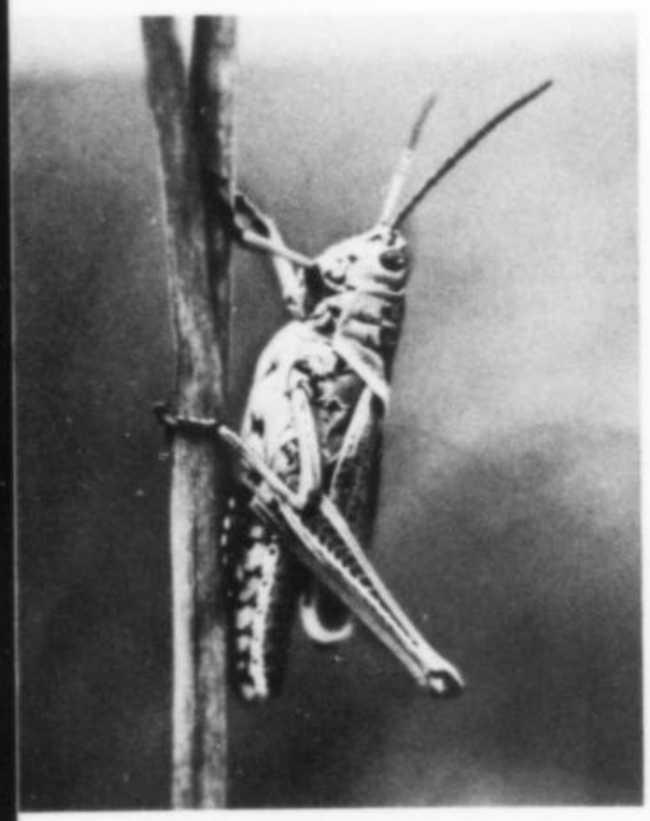
6. What's that? A _____.

8. I see! It's _____.

1. Owl

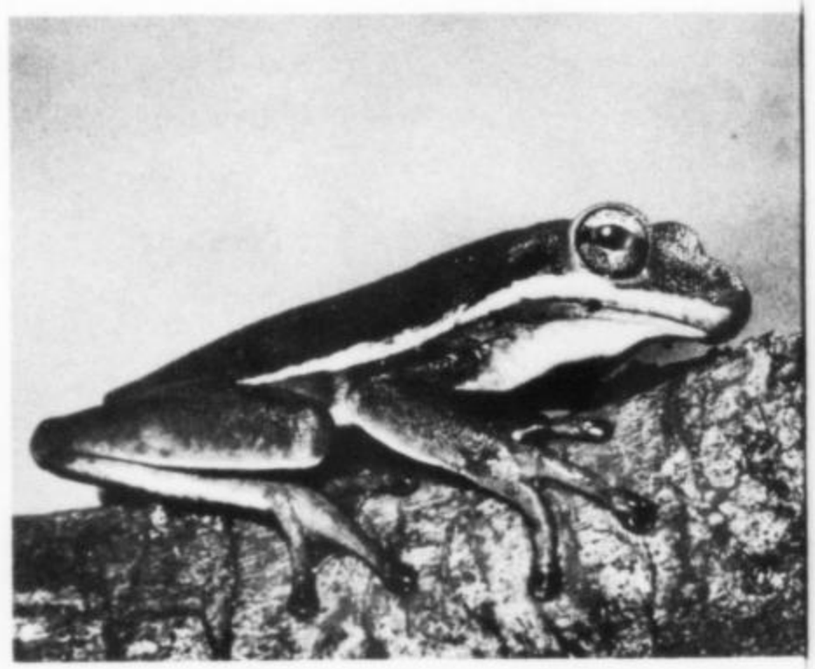


2. Fish



3. Grasshopper

4. Mouse



5. Frog

6. Bobcat

7. Turtle

8. Me

Photo credits: Photos 1, 2, 5 and 8 by Russ Kinne; Photo 3 by Robert Dunne;
Photo 4 by Karl H. Maslowski; Photos 6 and 7 by Leonard Lee Rue, III

Ollie Otter's FUN and GAMES

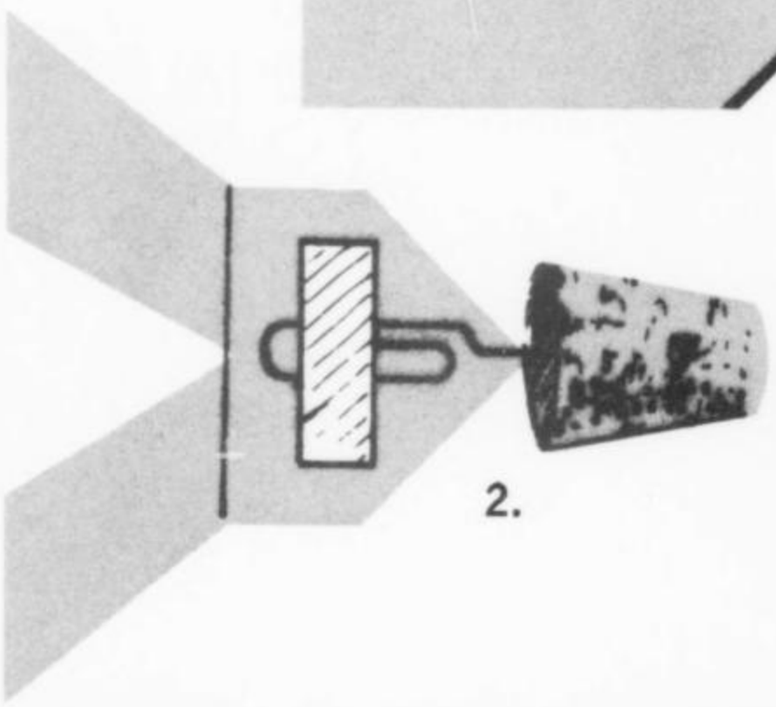
Whirly-Bird Game

You will need some corks (¾ of an inch across the top is a good size), and pieces of stiff paper (2 inches by 3½ inches) cut as shown in Picture 1. Also have paper clips and a roll of narrow masking tape.

Make your own whirly-birds by opening out one end of a paper clip and sticking it into the center of a cork. Then tape the paper clip flat at the pointed end of the paper. Bend one tail flap up and the other down as in Picture 2.

To play the game at the beach, scoop out some "nests" in the sand and draw a big circle around them for the "tree." On a lawn you can use boxes for nests and make a circle of string. Decide on a score for birds landing in the tree and a higher score for birds landing in nests. Stand away from the tree and take turns tossing the birds. The distance will depend on how much breeze there is.

1.



2.

Rangers' Riddles and Jokes

(Riddles, jokes and games should be sent to Ranger Rick, P.O. Box 2299, Phila., Pa. 19103. Be sure to give your name, age and address.)

What is the biggest bow in the world? (Rainbow)—*Karen Larson, North Dakota*

What three keys cannot open locks? (Monkey; Donkey; Turkey)
—*Robert Seiwert, California*

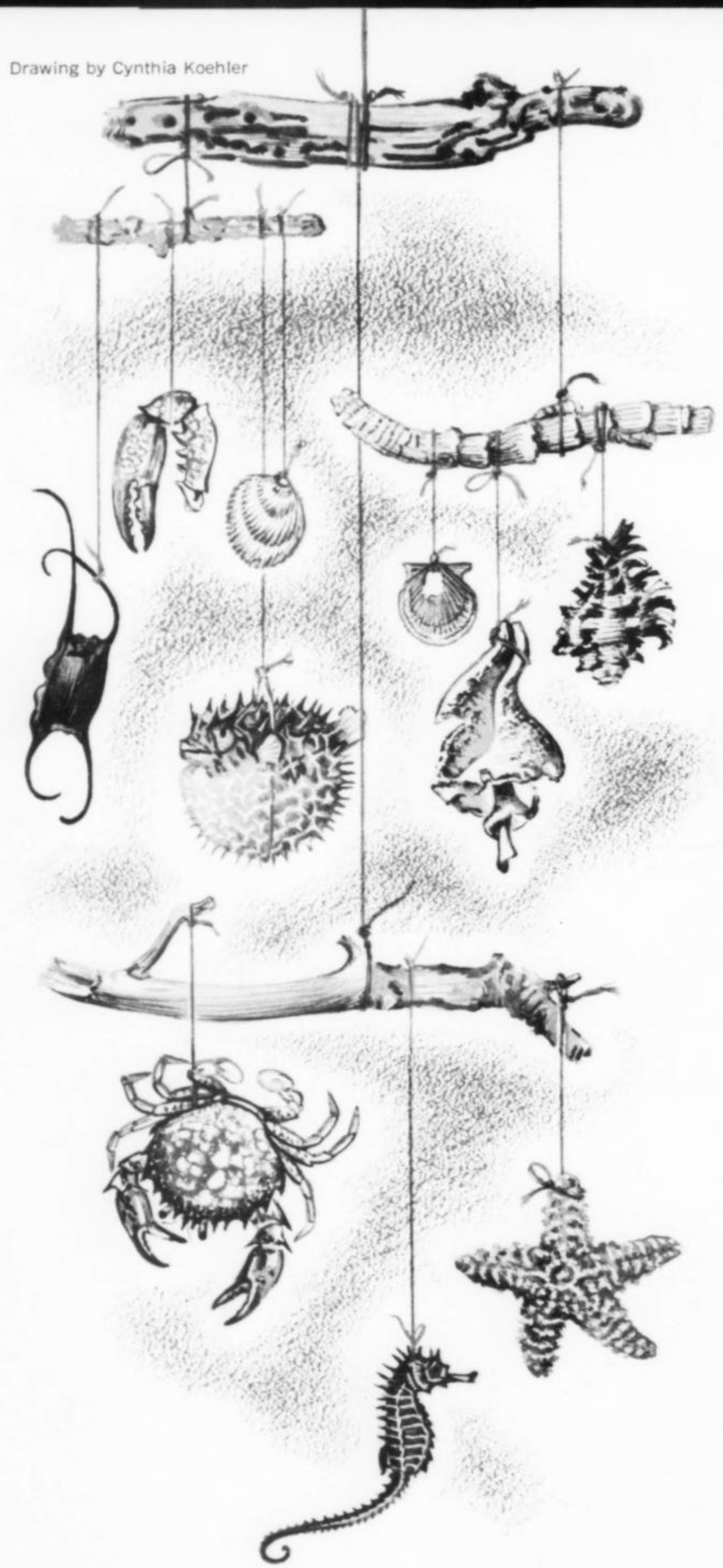
What do you throw out when you need it and bring in when you don't need it? (An anchor) —*Jeff Britain, Oregon*

Why does a hummingbird hum? (He doesn't know the words!)
—*Robbie Johnson, California*

What is a volcano? (A mountain that blew its top.) —*Thomas Schmidt, New York*

A baby fish saw a submarine under the ocean. "Oh, Mommy, what's that?" he cried. "Don't worry," she said, "it's only a can of people." *Paul Hanson, Wisconsin*

MAMMA OWL: I'm worried about Junior.
PAPA OWL: What's the matter?
MAMMA OWL: Well, he doesn't give a hoot about anything!
—*Roger Gutzat, New Jersey*



Drawing by Cynthia Koehler

Balancing a Mobile

by Charlotte Cheville

To experiment with balance, try building a mobile. A mobile can be made of almost anything. Since its secret is balance, the objects you decide to use should be fairly light and of nearly the same weight.

Begin by selecting a supporting bar. Balsa-wood strips, a piece of driftwood or a sturdy piece of wire, such as a coat hanger, will work well. This bar will support the mobile and is to be suspended from the ceiling by fine string or wire. Tie the string or wire firmly to the supporting bar, but so it can be moved back and forth to balance the mobile objects. Bend the ends of the wire or notch the wood so the string won't slide off as you attach the objects.

Now you're ready to hang your objects. There are many things that can be chosen, but remember, they need to be fairly light. A trip to the beach might provide shells, sea stars, bits of driftwood or feathers. Or a hike through the woods might turn up some pretty cones or acorns. Papier-mâché shapes or forms cut from paper or cardboard can also be used in a mobile. You might even display your nature collections this way.

To attach the objects to the supporting bar, tie strings to each end of the bar. Then tie the other ends of the strings to the objects.

Move the bar back and forth until the mobile balances. If you want to have more "levels," add more wire bars and repeat the balancing procedure. *The End*

A What of Which?

by Mary Frances Hildreth

Cattle come in herds—birds in flocks. Can you match these? Draw a line to the correct word.

1. Range of	wolves
2. Covey of	clouds
3. Mass of	stars
4. Pack of	lions
5. Pride of	prairie dogs
6. Hive of	porpoises
7. Forest of	bees
8. Colony of	quail
9. Herd of	mountains
10. Galaxy of	trees
11. Shoal of	elephants

A Crossword Puzzle On Tiny Creatures

by June McLean

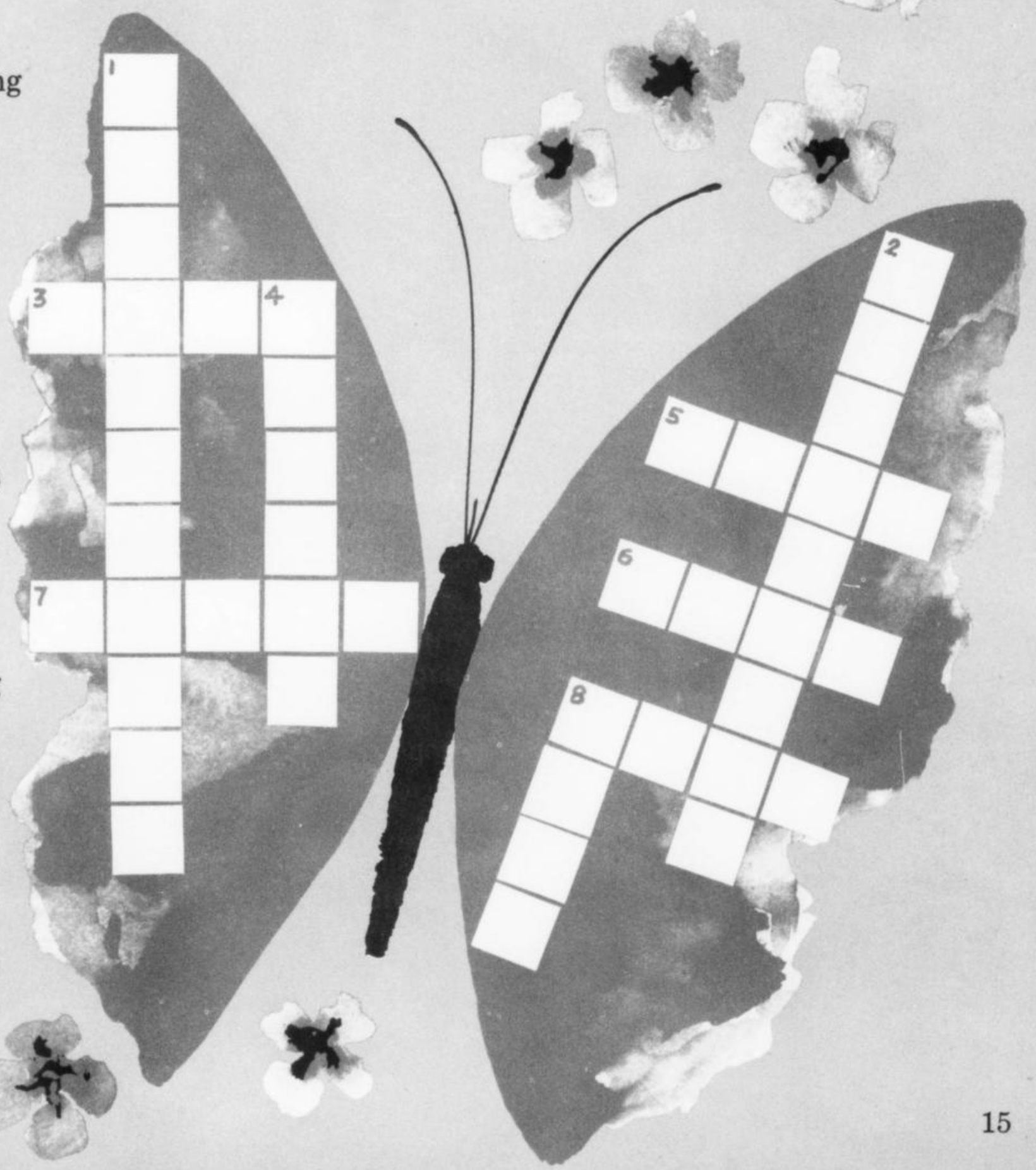
DOWN:

1. The larva or beginning of a butterfly
2. Insect shown in this puzzle
4. Spins a web
8. Small rodents found in fields

ACROSS:

3. They make honey
5. Insect that eats holes in clothing
6. Bait for fishing
7. Insects we often hit with a swatter
8. Tiny blind burrowing animal

Answers will be found on page 33.



Smallest of the birds named "hawk,"
If this little one could talk,
Hovering high as a tall steeple,
He would say that he likes people.

THE SPARROW HAWK

by D. A. Hoover

Photo by Karl H. Maslowski, Photo Researchers, Inc.

On warm summer days all over the United States and Canada the sparrow hawk rises high above the green meadows like a tiny helicopter. He sends his cry of "killy-killy" echoing round the hills.

Choose a quiet country road when the mellow August sun splashes on the green leaves in the woods and go for a walk. You might see one of these little fellows seated on his favorite perch of telephone or power wires.

He has a little round head, a cinnamon-rust colored body and he is slightly larger than a robin. He stares down at the meadow from his lofty perch, waiting for a mouse or a large grasshopper to move suddenly and show itself. Swiftly he swoops down and gets his meal.

Although he is a bird of prey, he is most helpful and the least harmful of all the hawk family because he eats many of man's harmful insect and rodent enemies.

He was misnamed when he was called sparrow hawk, for he really is a "grass-hopper" hawk. More than half of this hawk's diet is made up of grasshoppers, beetles and other insects. That is why he likes to live near farms and fields and raises his family where there is a good supply of insects and mice. The sparrow hawk is a real friend of the farmer—and of everybody.

The End

Ranger Rick And His Friends

by J. A. Brownridge

Adventure 7
The Great Forest Fire

A copper-colored sun beat down from a cloudless sky. This is the way it had been for weeks in Deep Green Wood. The trees were tinder-dry and the brook was running very low. There was just enough water in the middle of the brook so Sammy Bass could swim and eat.

There was a feeling of fear in the hearts of the older animals as they gathered in the clearing to listen to Ranger Rick. The young folks tumbled and played outside the circle, not worried about anything.

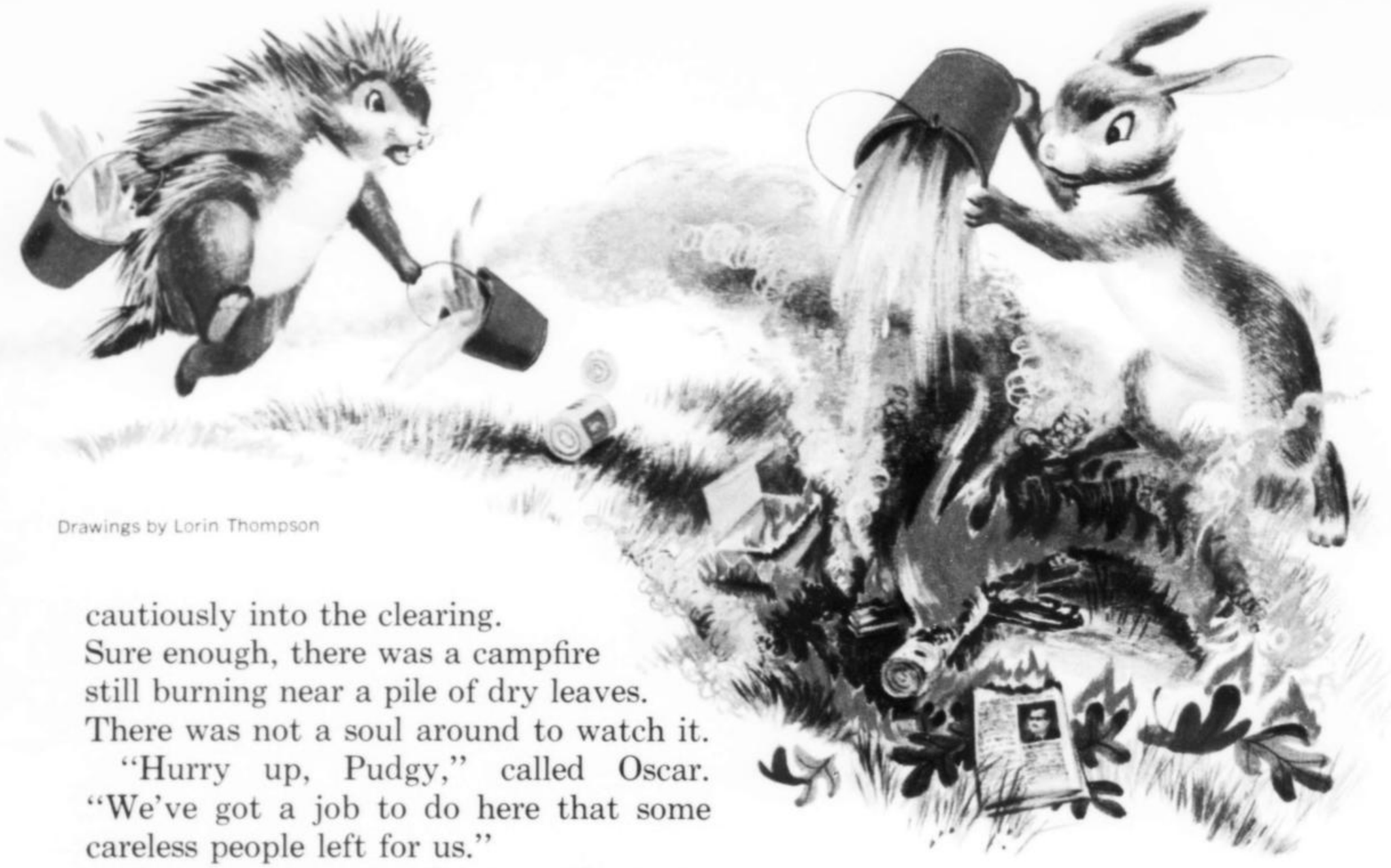
"Rangers," said Rick, "many of you remember the great forest fire a few years ago and know what a terrible thing it was for us who live in the woods. Some of you lost your homes and some of you lost your friends and family in that awful blaze. Our Ranger Patrol must earn its name and begin patrolling the woods to keep fires from starting.

"Each of you has a job to do and a part of our forest to patrol, so let's get started."

Off they scampered in all directions. Up the trail together went Pudgy Porcupine and Oscar Rabbit. Their patrol covered the campsite where picnickers sometimes stopped to cook lunch.

Oscar trotted on ahead and peeked

Please turn the page



Drawings by Lorin Thompson

cautiously into the clearing.
Sure enough, there was a campfire still burning near a pile of dry leaves. There was not a soul around to watch it.

"Hurry up, Pudgy," called Oscar. "We've got a job to do here that some careless people left for us."

Together they ran down to the creek and scooped up pails of water. Back up the bank they struggled to pour the water on the fire. Steam rose and water spattered as the fire hissed and sizzled and died. Then the two Rangers shoveled dirt on the hot ashes to make sure the fire was completely out.

Meanwhile, Rick and his old buddy, Ollie Otter, were on their way to patrol the middle of the woods.

Down the trail they went till they reached the old stone bridge. "Think I'll look around a bit," said Rick as he climbed a tall, straight tree. He peered all around as Ollie sniffed the air below for some trace of smoke.

"Smoke up ahead," shouted Rick as he scrambled and skidded to the ground. "Let's get to our Ranger Headquarters as fast as we can!" Away they flew down the trail to their tool-shed.

Quickly Ollie helped Rick strap on the firefighting water tank and tools.

"Run for the other Rangers and bring help as fast as you can," Rick ordered as he turned up the trail toward the fire.

On he rushed as fast as his legs would carry him. Now other animals hurried past him, running in terror from the fire. Foxes and rabbits ran side by side, the rabbits so frightened by the flames behind that they forgot the foxes were their enemies.

"Better run the other way, Rick," they called. "It's a bad one!"

But on went Rick. Somebody had to stop the fire or all the animals would be killed or homeless. Suddenly there he was, face to face with the raging fire.

Flames were climbing up the trees, licking hungrily at the dry leaves and branches. Then from treetop to treetop the flames leaped as a strong wind blew hotly in Rick's face. Fear tugged at Rick's

heart, but he knew he must stay and fight this terrible enemy.

Far behind him, Rick's Rangers were running up the trail, forgetting their usual care. They thought only of getting to Rick with all the help they could gather.

Closer and closer they came to the fire. The hot wind was blowing in their faces and the flames roared with the terrible sound of doom to Deep Green Wood.

At last they reached the spot where Rick was fighting like a hero. He stopped only long enough to shout orders to spread out and try to clear a wide opening in the path of the fire across which the flames couldn't jump.

Away they all went cutting and pulling at the brush and trees as the fire roared ever closer.

"Hurry!" shouted Rick, "the sparks are falling across our fire break. Some of you beat them out." Frantically they rushed from place to place, but it was no use. The flames were soon over their heads and Rick, in despair, ordered a retreat.

Rick, as usual, was right up front closer to the fire than anyone else. Back he went fighting every step of the way as the fire roared ever closer to their homes.

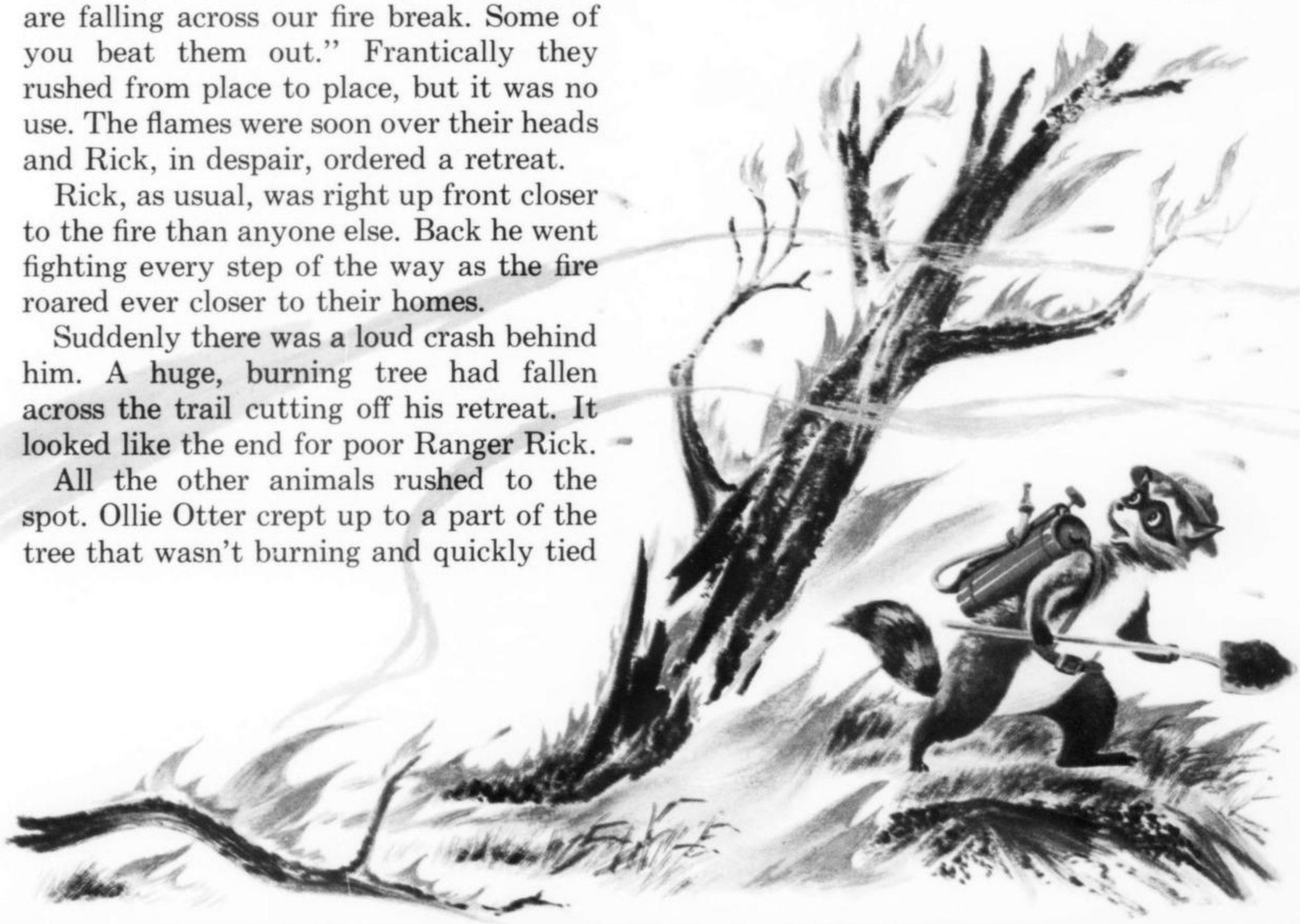
Suddenly there was a loud crash behind him. A huge, burning tree had fallen across the trail cutting off his retreat. It looked like the end for poor Ranger Rick.

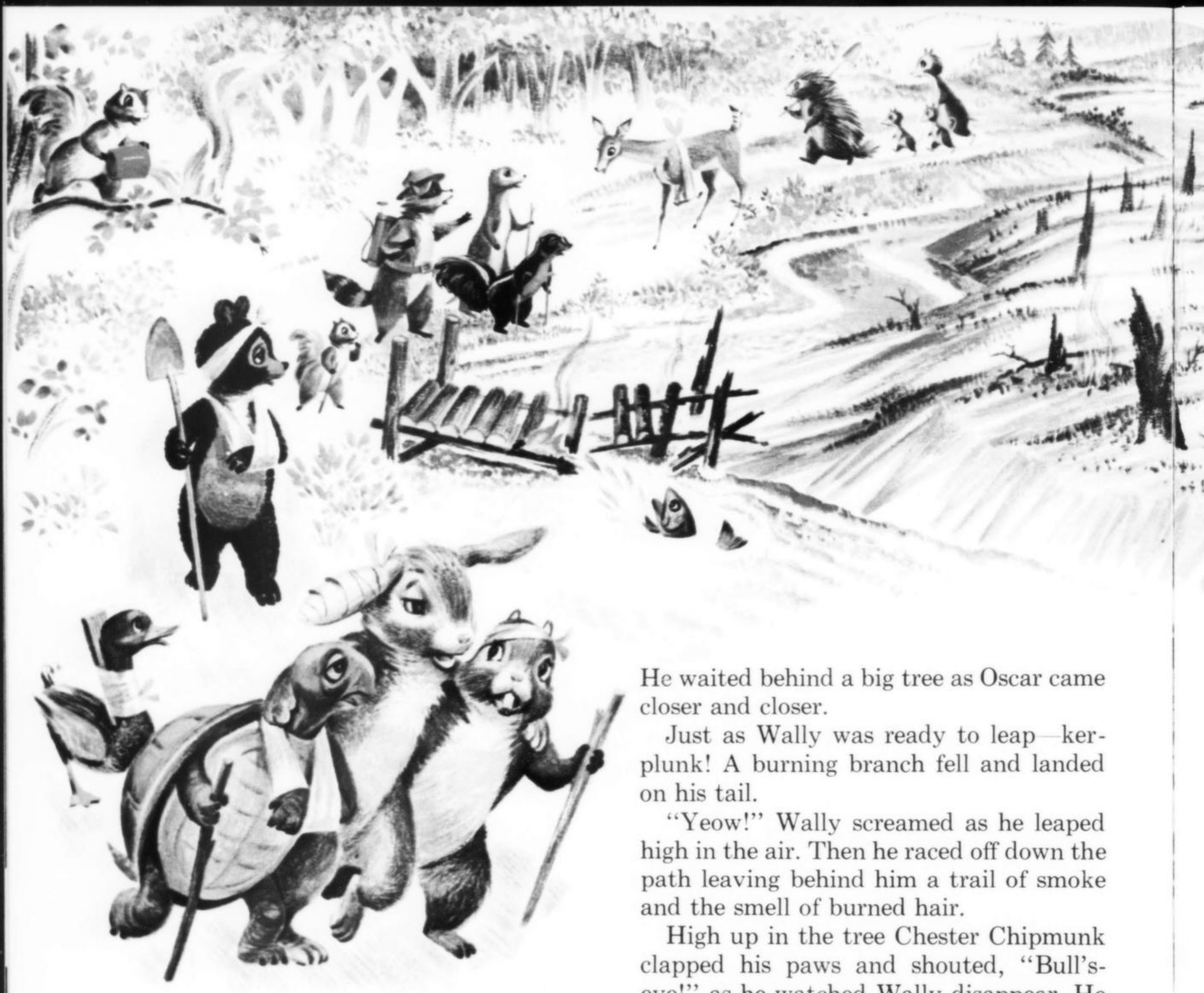
All the other animals rushed to the spot. Ollie Otter crept up to a part of the tree that wasn't burning and quickly tied a big rope to it. Then everyone took hold and pulled with all his might. Slowly the tree moved and everyone pulled even harder. At last a small space was cleared and Rick leaped through the hungry flames to safety.

"Everyone back across Clear Creek!" shouted Rick. "We'll make another stand by the old log bridge."

Quickly they spread out along the creek and took up their fight again. It wasn't long before the flames reached the other side of the creek. Up and down they ran beating at sparks that flew across the creek. The squirrels and chipmunks chewed off smoking twigs high up in the trees. Down in the creek Billy Bass splashed at sparks on the bridge, which was slowly beginning to burn.

Please turn the page





They were fighting so hard that they didn't notice a big gray form slinking through the woods behind them. It was old Wally Wolf who had led all the rest in fleeing from danger. But now his greed had overcome his fear. His heart still beat fast, but the thought of all those juicy morsels had brought him back. One quick leap and he could be off again to safety—and with a full stomach besides.

Slowly he crept up behind Oscar Rabbit. He waited behind a big tree as Oscar came closer and closer.

Just as Wally was ready to leap—ker-plunk! A burning branch fell and landed on his tail.

"Yeow!" Wally screamed as he leaped high in the air. Then he raced off down the path leaving behind him a trail of smoke and the smell of burned hair.

High up in the tree Chester Chipmunk clapped his paws and shouted, "Bull's-eye!" as he watched Wally disappear. He had spotted their worst enemy just in time. Quickly gnawing off a burning branch, he had dropped it right on target—Wally's tail!

"Thank you," called Oscar. Almost without stopping his work, he beat out the branch that had saved his life.

Furiously they all worked on. At last it looked as if they were winning. The wind began to switch and fewer sparks fell. Finally the fire was out.

Everyone gathered around Rick and

gazed sadly at the smoking tree trunks across the creek. Their log bridge was partially burned and the scene was one of almost complete devastation.

Leaving two Rangers to guard against the fire's starting again, Rick and the others limped back to the Ranger Headquarters. Almost everyone was singed and scratched and needed help from the nurses. They looked like soldiers returned from a war and all were too tired to look happy.

Next morning they woke to a wonderful heavy rain which was drenching the forest and drowning the last smoking embers of the forest fire.

Rick gathered all his Rangers together in the Ranger Headquarters. "I'm proud of every one of you," he said. "You've all earned your firefighting medals, but best of all, we saved our homes and families. You're all heroes of Deep Green Wood.

"We must try to get people to be more careful in the woods and be sure their campfires are out, that they break all matches before they throw them away, that they use the ash trays in their cars and never throw lighted cigarettes or cigars from their car windows.

"Now, friends, let's all go home and get a good rest and I'll see you at the next Ranger meeting."

With that, they all trooped off down the trail toward the homes that only yesterday they had almost lost—because someone was careless. Was it you?

The End

The

Story and photos by James Hancock

HIGH UP in the tree-covered mountains of Hawaii live some of the most colorful birds in the United States of America. The trees form a thick jungle, and rain clouds often cover the mountaintops, making it hard to see very far. Few people go into these forests on the outer islands, but those who do will see little birds called "honeycreepers."

The early settlers gave the birds strange names. When you say these names, pronounce each letter and pause after every vowel, like this: *a-pa-pa-ne*. Now try to say *i-i-wi*, *a-ma-ki-hi*, *a-ni-a-ni-a-u* and *e-le-pa-i-o*.

These birds are called honeycreepers because they drink the nectar of the red and yellow blossoms of the ohia trees and other plants. They also eat the insects hidden under the bark and leaves. They are small birds, not more than five inches long.

At one time all these birds were of the same species. Possibly a pair of orioles flew out to sea from the California coast. Losing their way, they may have landed on one of the Hawaiian islands. They must have liked the forest with its abundant food supply, for they settled down and nested and reared their young. Gradually each new generation moved to different parts of the forest and fed on other plants. Slowly over the years they became entirely different from one another in shape and color.

The bright red bill of the scarlet *iiwi* is used to probe for nectar in blossoms high in the treetops (Photo 1). The black and red *apapane* feeds lower (Photo 3), flitting from branch to branch like a hummingbird. The small canary-colored *anianiau* and its larger cousin the *amakihi* (Photo 2) often feed in the low bushes in the forest clearing and on the banks of fast-flowing streams. Photo 4 shows the *elepaio*.

These delightful little birds are now very rare and need to be carefully protected if they are to survive. They are part of the wonderful heritage of our newest state, Hawaii. *The End*

Honeycreepers Of Hawaii

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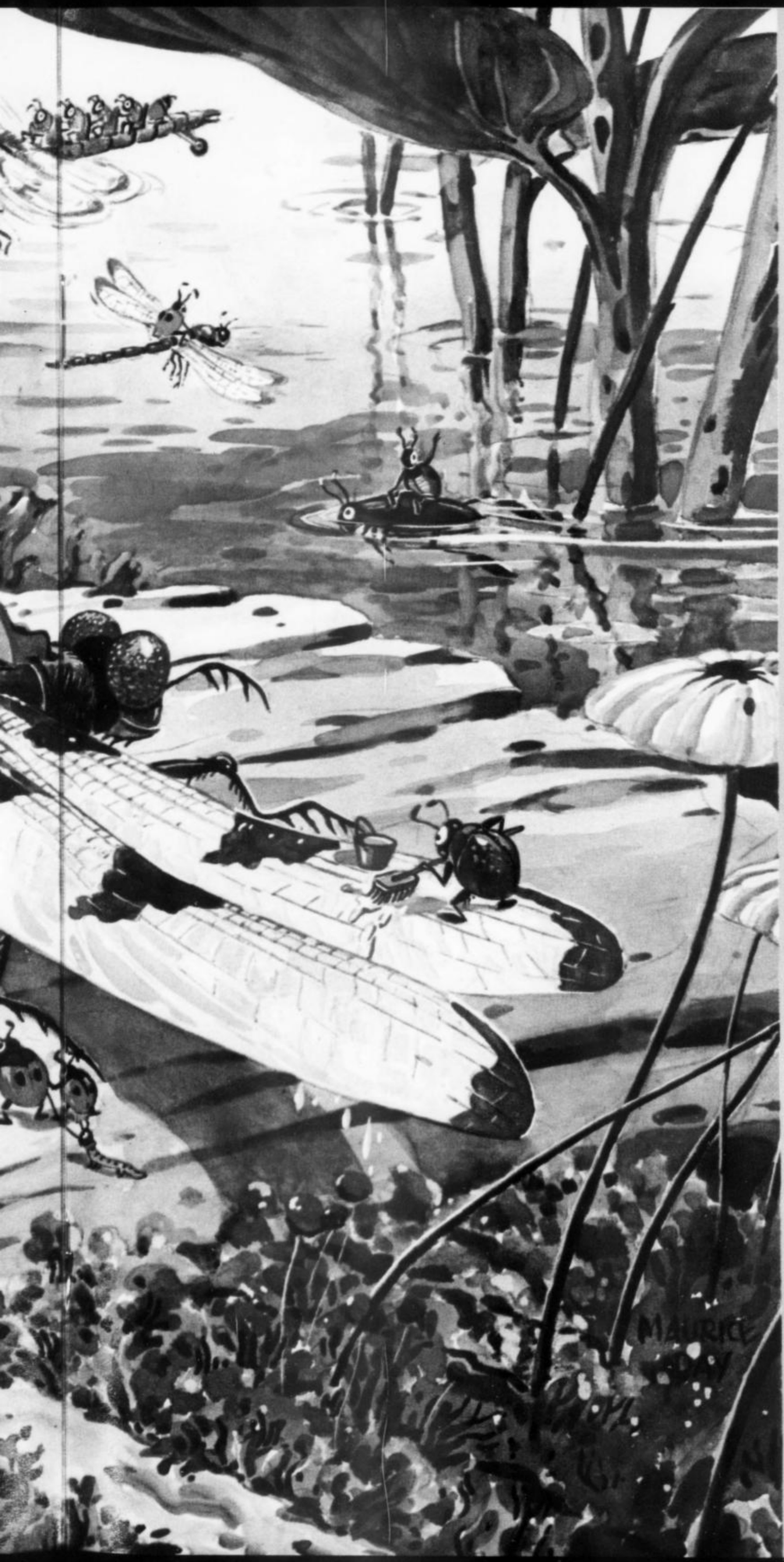
INFORMATION
TICKETS



Drawing Courtesy of Barton-Cotton, Inc.

The Dragonfly Express

by Margo Duryeá

Standing by for take-off
Sat the "dragonfly express!"
There was so much going on,
My goodness, what a mess!

The control tower was alerted
To keep the runway clear
And hurry in the other "flies"
That came from far and near.

Each passenger was told
To "please take your seat,
Fasten the safety belt,
No standing on your feet."

The steward collected the fares,
While the porter loaded the gear.
The onlookers waved good-bye
(Some even shed a tear).

The loudspeaker announced,
"There will be a slight delay
But no one is to worry—
It's such a lovely day."

As soon as the wings were scrubbed
And shining, sparkling bright,
The pilot climbed into his seat
Behind a green headlight.

Now everyone was ready
To start the long, long flight.
It would take them two whole days
And one entire night.

It zoomed off the runway
Without a bit of stress.
In and out of cattails
Flew the "dragonfly express."

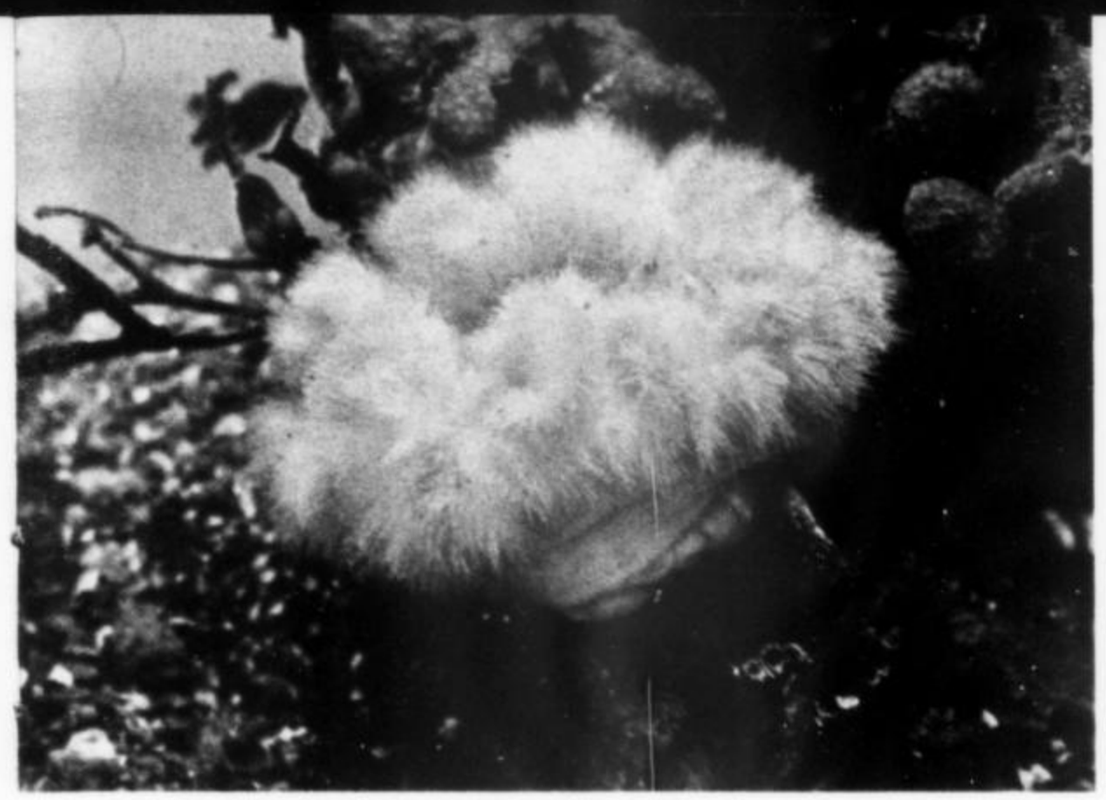
Sea Anemones: plants or animals?

Story and photos by Russ Kinne

The sea—that big, fascinating body of water that covers three quarters of our earth—seems to be full of surprises.

Have you ever waded around tide-pools? Or been lucky enough to skin-dive? Or ridden in a glass-bottom boat over a coral reef? If you have, you may have seen pretty "flowers" four or five inches across attached to the bottom of the sea. They have lots of "petals" that wave in the water currents and they seem to be rooted in one spot. Someone has likely told you they are *anemones* (uh-NEM-oh-nees). There is also a woodland flower called anemone. But did you know these underwater anemones aren't flowers at all, but *living animals?*

Strange as it seems, that's just what



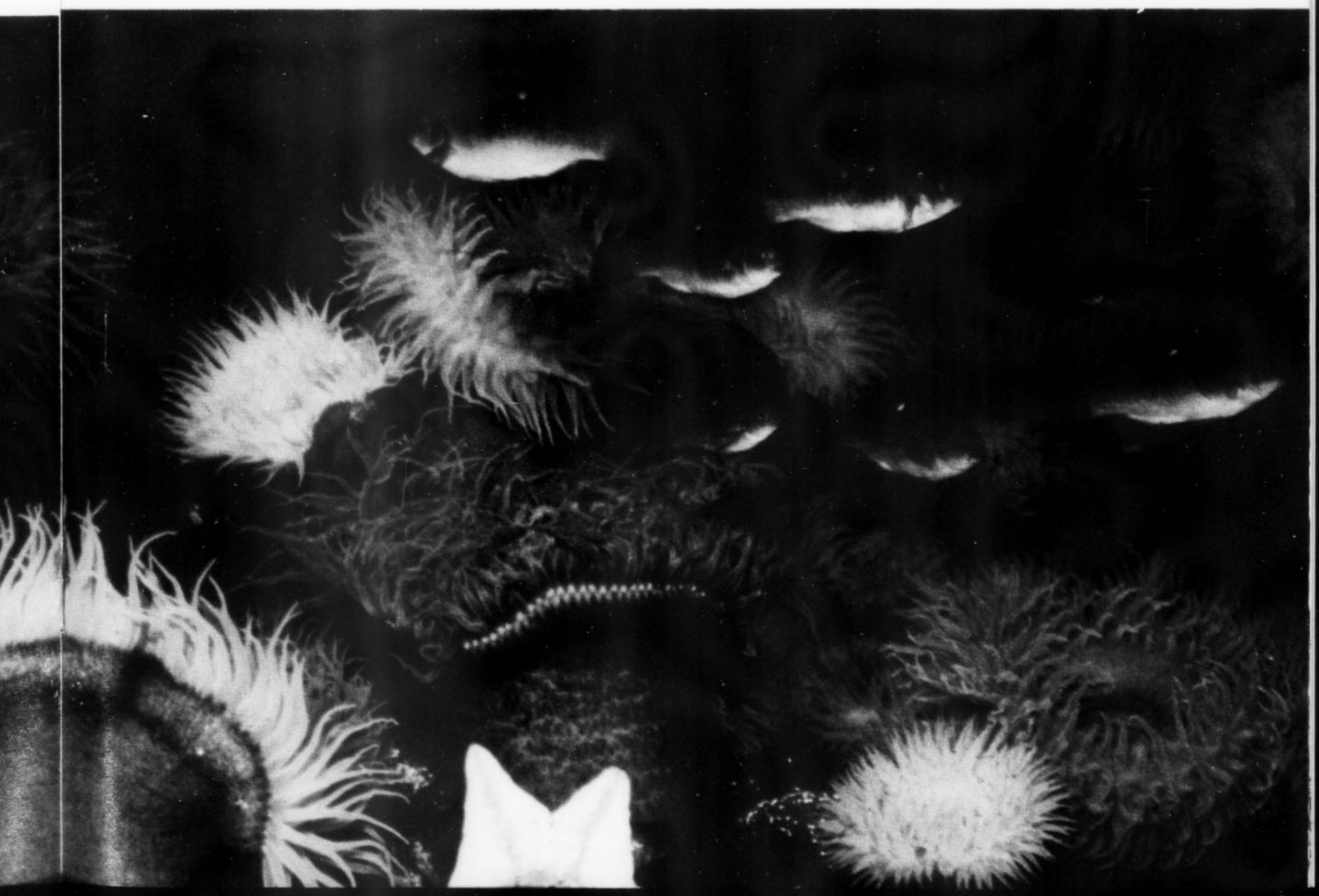
The metridium (me-TRID-ee-um) anemone grows in the North Atlantic. It is also called the plumose (PLOO-moze) anemone because it looks feathery.

The anemones below are growing in a tide-pool tank. Sometimes they crawl up the glass side and the muscular "foot" can be seen. They cling to the bottom by this foot which is called a "basel disc."

they are: living animals that catch and eat small fish. The "petals" are tentacles, covered with small stinging cells.

The sea has another surprise for us. A few species of fish, especially the clown-fish, aren't bothered by anemones. They often dive right into the tentacles of an anemone without being stung! Even scientists wonder how they do this.

So we see that there are a lot of interesting and puzzling things about these undersea "flowers" called anemones. They aren't what they seem to be. We are wrong even if we think they stay in one spot all the time, for they can crawl around from time to time. No one could ever accuse them of speeding because their top speed is about one inch an hour!



Scientists believe that the chocolate clownfish covers itself with a mucus so that the anemone cannot sting it. It will even hide among the tentacles when danger comes near. Some fish that don't have this coating are stung to death and then eaten by the anemones.

The tentacles, or "arms," are covered with small stinging cells. These cells inject poison into any fish that bumps into them. That's a good reason not to brush against them yourself! Although it might be painful and unpleasant, anemones can't cause humans any real harm.

The photo at the right looks like fireworks. It is really small Pacific Ocean anemones called gregarious (gre-GEHR-ee-us) anemones. Gregarious means "living in flocks or herds."

A few anemones are white, but most kinds have some color, which makes them look even more like flowers. Some species are green because of green algae living in their flesh.

The End

story and photos by Richard B. Fischer

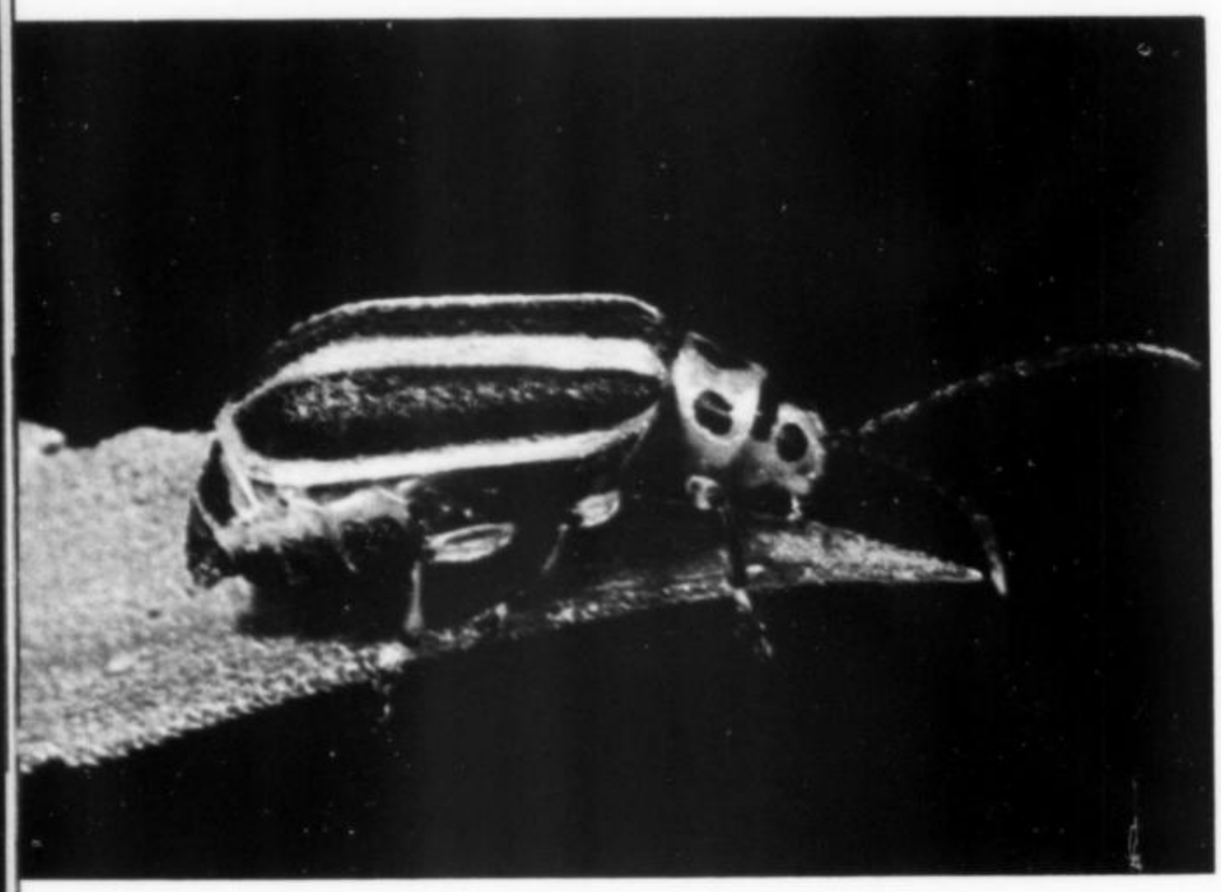
THE GOLDENROD JUNGLE

Drawing by
Jack Weaver

Did you know there are wild animals that gobble up the leaves of plants? That eat pollen from flowers? That lie in wait to pounce on their victims? You can watch these exciting events without journeying thousands of miles to explore the jungle. Where? Wherever goldenrods grow!

What animals should you be on the lookout for? Deer? Rabbits? Panthers? No. The animals living in our jungle—the goldenrod jungle—are insects. That's right, insects. Sure they're small, but we can watch them do the very same things larger animals do.

1. Striped Goldenrod Beetle



2. Locust Borer

All animals must eat. Some feed mainly on plants. It seems that for every plant, there is at least one animal that likes to eat it. Quite a few insects eat only goldenrods. One is called the *striped goldenrod beetle* (photo 1). It is often found in large numbers and it gobbles up goldenrod leaves as a herd of deer eats grass. Jiggle the plants and discover how the beetles escape danger *without flying*.

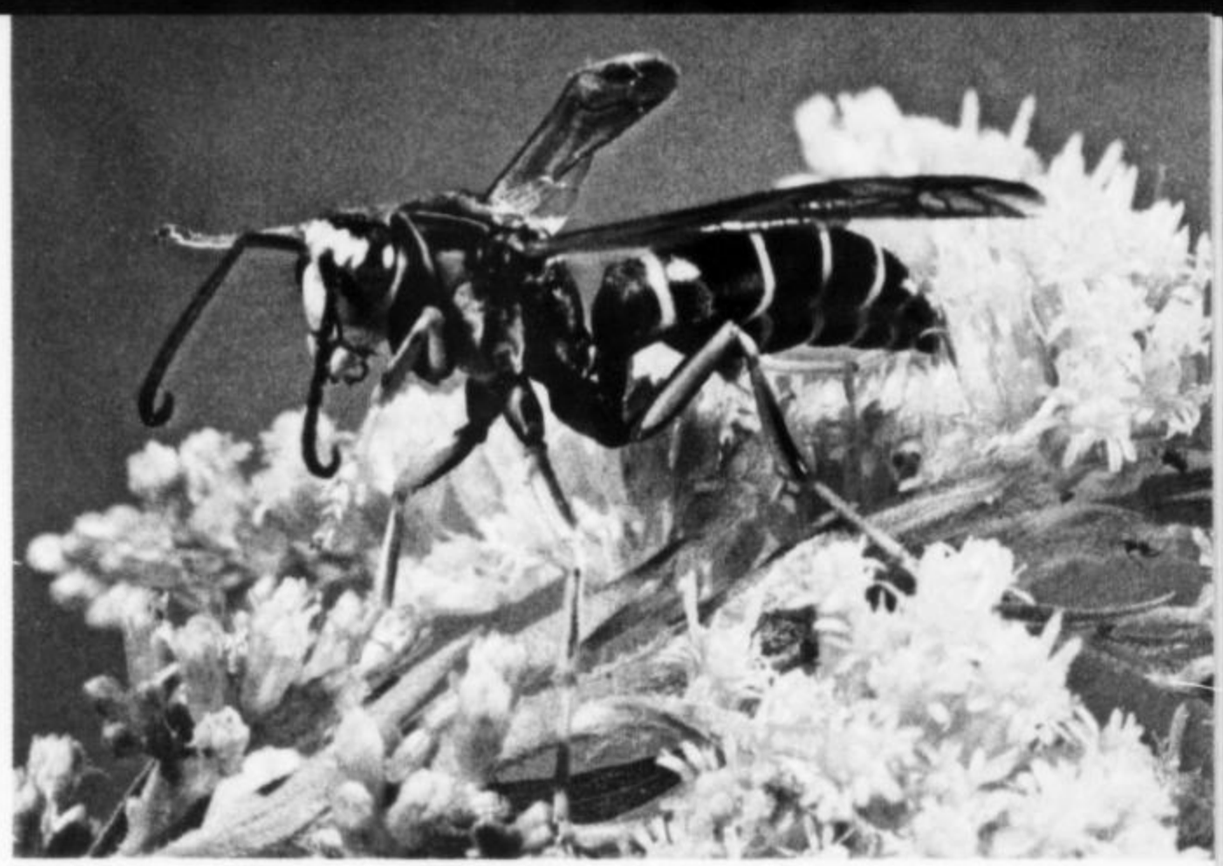
Other creatures of the goldenrod jungle are plant eaters also. However, they dine on pollen too. During September look for

a black beetle with wavy yellow bands across it, and long "antennae" or feelers. It is nearly one inch long and is called the *locust borer* (photo 2). From its name you can guess why man does not like him.

3. Soldier Beetle

The young insects ruin locust trees with their boring and eating. The adults eat goldenrod pollen.

Late summer is a good time to meet the *soldier beetle* (photo 3), a pollen eater that is not harmful to men. This half-inch-long

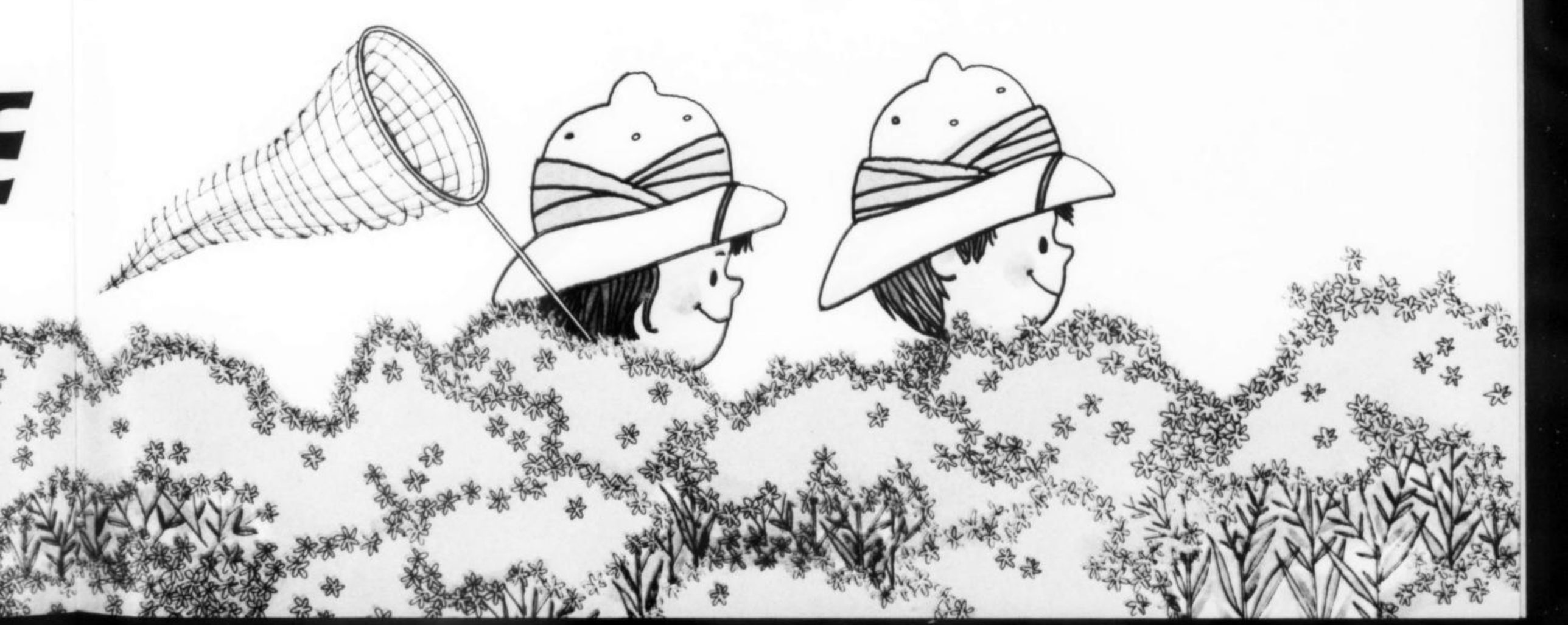


4. Polistes Wasp

yellow insect will remind you of its close relative the firefly, except that it has a long black spot near the tip of each wing cover. Its antennae are longer too. When it is a "larva" or baby the soldier beetle eats other insect larvae that are usually harmful ones.

That's the way it is with insects that prey upon other insects. They do not know that man calls some insects "good" and others "bad." They simply eat whatever is easiest to catch. They think any insect they can eat is a good insect. The same is true of panthers, wolves and foxes: They eat just about as many "good" things as "bad" in a lifetime.

Please turn the page



Another late summer pollen eater is the *polistes wasp* (photo 4). The picture will help you recognize it. A polistes is not mean like other wasps so don't be afraid to watch this creature from close-up as it examines each little goldenrod flower for food. When polistes is a larva, it lives in a paper nest where nursemaid wasps feed it partly chewed caterpillars.

Is your eyesight as keen as Ranger Rick's? Then you will have fun hunting in the goldenrod jungle for insects that are seldom seen. One is a yellow and brown bug that is about a quarter of an inch long. It is the oddest looking insect you might ever find. Study photo 5 and you may understand why he is so difficult to describe. He will never win a beauty contest with his looks. But his strange appearance is perfect for hiding from and ambushing other insects that visit goldenrod flowers. His name? The *ambush bug.* Like so many other insect-eating insects, he eats whatever he can overpower—even if it happens to be as large as a honeybee or butterfly.

During your trip through the goldenrod jungle you will also meet many spiders. But give yourself a gold star if you discover a *crab spider* (photo 6). It is hard to see, so perfectly does it hide itself among the blossoms. Because it is yellow like the flowers, with some pretty reddish markings in just the right places, it is very hard to see. With legs outstretched ready to grab an unsuspecting visitor, it really does resemble a tiny crab. Here's a question for a goldenrod jungle explorer: Does a crab spider eat as we eat a hamburger, or does he sip the way we sip an ice-cream soda through a straw.

Although they do not know it, the goldenrod creatures repay the plant for its favors. You see, pollen must get from one goldenrod plant to another for seeds to be formed. However, goldenrod pollen is too heavy for the wind to carry from plant to plant. While insects walk about among the blossoms, they get pollen on their feet. When they go to the next goldenrod, some of the pollen sticks to the new flowers and seeds can form.

Are there other animals in the goldenrod jungle? Yes. Flies, moths, butterflies, weevils, bees and many more are waiting for keen-eyed explorers. See whether you can find them! *The End*

5. *Ambush Bug*

6. *Crab Spider*

WHO-O-O KNOWS

by Wise Old Owl

The Question Box

I would like to know how many species of birds there are in North America. —*Paul Ankey, Michigan*

About 1780 species of birds, belonging to 97 families, live and breed on the continent of North America.

Please tell me where birds' ears are. —*Cathy Brackin, Age 8, New Jersey*

Birds do not have an outer ear as man and other mammals do, but they have keen hearing. The openings of a bird's ears are on each side of the head somewhat behind the eye and covered by feathers. A bird's ear has an eardrum, a middle ear and an inner ear.

Are there any national wildlife refuges in Illinois?

—*Hugh Hillebrand, Age 10, Illinois*

According to a map showing National Wildlife Refuges, issued by the Bureau of Sport Fisheries and Wildlife, there are two: Chautauqua in the central part of Illinois, and Crab Orchard in the southern part. This map is in a four-page bulletin called "The National Wildlife Refuge System." Another helpful bulletin is "National Wildlife Refuges." Rangers who wish to know what refuges are in their states may order copies by title from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The first bulletin is five cents; the second is thirty-five cents.

How fast can the fastest bird fly?

—*Barbara Jean Smith, Age 9, Missouri*

Duck hawks and golden eagles have been clocked by airplanes in dives at 180 miles per hour. Common swifts of Europe and Asia usually fly from 60 to 70 miles per hour and have reached a speed of 100 miles per hour in short bursts. The canvasback duck can fly 70 miles per hour.

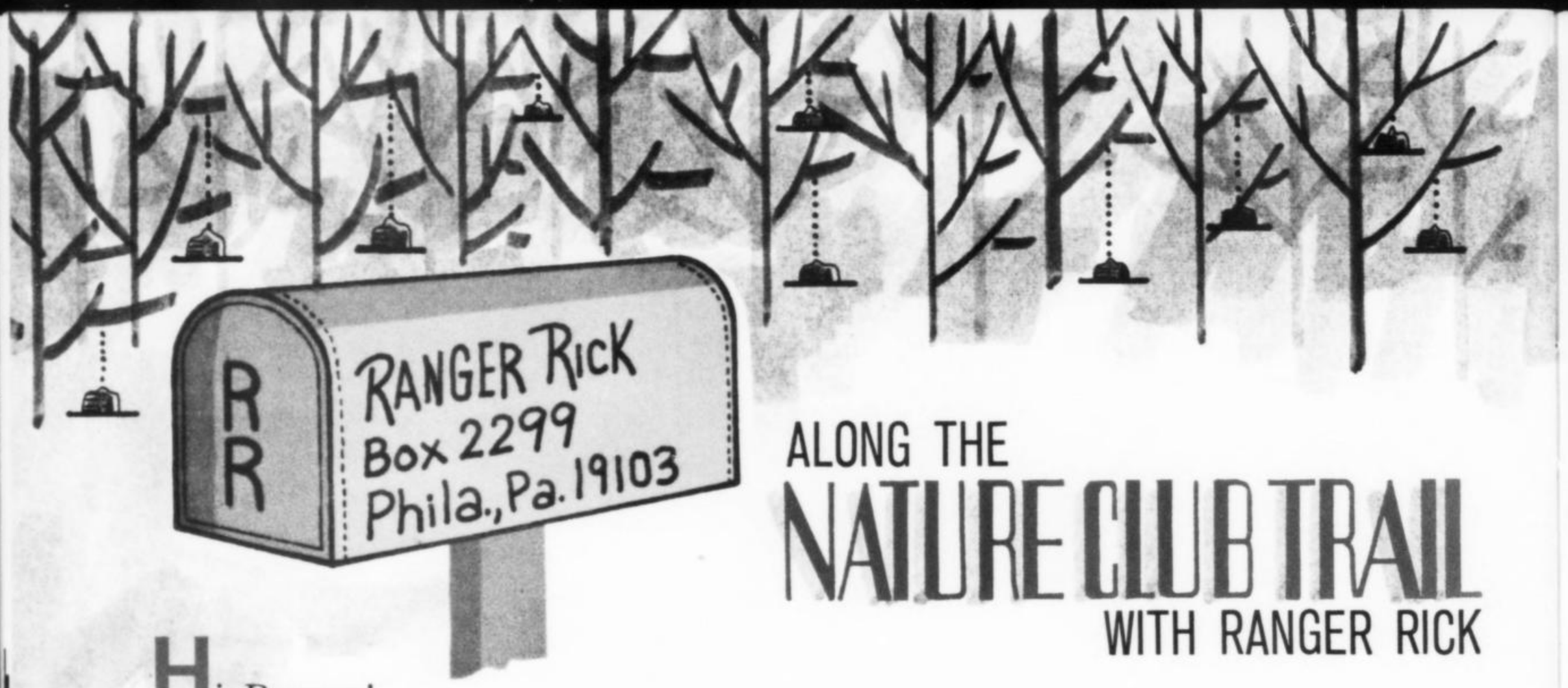
Puzzle Answers

Woodland Riddle on Page 9: 1. Beaver; 2. Skunk; 3. Loon; 4. Opossum; 5. Raccoon; 6. Wood Duck.

A What of Which? on Page 15: 1. Mountains; 2. Quail; 3. Clouds; 4. Wolves; 5. Lions; 6. Bees; 7. Trees; 8. Prairie Dogs; 9. Elephants; 10. Stars; 11. Porpoises.

Crossword Puzzle on Page 15:
DOWN: 1. Caterpillar; 2. Butterfly; 4. Spider; 8. Mice.
ACROSS: 3. Bees; 5. Moth; 6. Worm; 7. Flies; 8. Mole.

NOTE: Rangers' questions help us plan our magazine. Send them to Wise Old Owl, c/o Ranger Rick, P.O. Box 2299, Phila., Pa. 19103. Be sure to give your name, age and address.



ALONG THE NATURE CLUB TRAIL WITH RANGER RICK

Hi, Rangers!

One of you ended a letter to me by saying, "Take care of Deep Green Wood!" In Adventure 7 on Page 17 you can find out just how hard we try. I hope we never have another fire like that!

The other day Ranger Tom told me some sad news. It was about a careful study made of forest fires in and around Angeles National Forest in southern California. Almost five hundred fires had been caused by children playing with matches. About half of these children were less than eight years old.

What happened in southern California is getting to be a problem in many other places. Now there are more homes on the edges of our wildlands. That means there are more children and more brushlands and fields in which they can play—sometimes with fire!

Rangers, no matter how young you are, you know that matches are NEVER anything to *play* with. But Rangers can do an important fire-prevention job by letting your friends know what a stupid thing it is. You can set a good example for your very young brothers and sisters, who look up to you. Also, while playing outdoors in the summer, Rangers are often in a better spot than grown-ups to stop tiny tots from playing with matches. This is an important way to keep your own homes safe as well as mine in the forest.

We now have thousands and thousands of girls and boys all across our country—some as far away as Alaska and the Virgin Islands—who are members of Ranger Rick's Nature Club. Thank you for so many letters about the fun and interest you get from the magazine that goes with your membership. I am glad to hear you share it with your friends and teachers.

I think you should know that being a member of the National Ranger Rick Nature Club means that you help conservation in more than one way. By learning about and enjoying Nature, you find out why we must conserve wildlife and other precious natural resources. Then, too, your dues help the conservation work of the National Wildlife Federation. So I am happy to hear many of you are working to get at least four new members so you can start Official Branches in your own neighborhoods and schools.

Keep having a happy summer!

RANGER RICK

Nature Club News

Welcome to the very first OFFICIAL BRANCH of Ranger Rick's Nature Club—the River Rangers! As the rules require, they hold five memberships in the national club. (The Heilmans and Perrymans, being in the same family, share memberships.)

As you know, an OFFICIAL BRANCH may be either a Neighborhood Club or it may be a Class Club built around a school or Sunday-school class or other group. The River Rangers is a Neighborhood Club.

The boys chose their club name because they live near the American River. (To find it, look on a map of California near the city of Sacramento.) Their first meeting was held at the river. Since then they have had many other hikes to explore its levee and sandy shores.

Eric and Brian Heilman, along with others, hold "five square yards of ELBOW ROOM" within Sara Park (Save the American River Association, Inc.). This means they bought real property on the river which was then deeded over to Sacramento County as part of the American River Parkway. The River Rangers will ride bike trails along this parkway. This is a citizens' effort to save a scenic area for which public funds were not available.

The boys arrange their own weekly meetings, taking turns at being a host family. Ranger Mom, Lois Perryman, took them on a tour through Sacramento Junior Museum to check up on animals in their area. Most of the boys belong to the museum which has an animal lending library and traveling nature exhibits that visit schools on request. Ranger Dad, Paul Lux, gave the boys a personally conducted tour of the Engineering Department of Sacramento State College.

The River Rangers are collecting seed and leaf samples to learn about local trees. They plan a display of rocks and wildflowers to share with classmates at the Caleb Greenwood Elementary School. They are interested most of all in living creatures.

Ranger Mom and Dad, Marilyn and Robert Heilman, sent us this information. We think it will be a great help to other individual members of Ranger Rick's Nature Club who are trying to start OFFICIAL BRANCHES. Mr. and Mrs. Heilman also wrote: "The magazine is superb. Many of our friends are catching onto the Ranger Rick idea and we hope they get their subscriptions in and that the clubs will grow in number and in their aim of giving children the information and ideas that will lead them to help conserve our resources and to seek the beauty to be found among living things."

Thank you, Mr. and Mrs. Heilman. Ranger Rick and his friends wish the very best of luck to the River Rangers!

The River Rangers, first Official Branch of the national Ranger Rick's Nature Club. From left to right: Brian Heilman, 10; Dick Chappell, 8; Eric Heilman, 8; Jim Lux, 8; Eric Perryman, 8. Not present: Mark Kinney and Donald Perryman.

Nature Hobby News

Rangers, keep up the good work of writing to me about your nature hobbies. You're doing a great job, as you can see!

I saw Jupiter with my telescope a few nights ago and I saw some of Jupiter's moons. My teacher lets me read my magazine to the class.

—*Buddy McBride, Age 7, Louisiana*

The way I got interested in nature hobbies was by going to the Lake Erie Junior Nature and Science Center in Bay Village, Ohio. Last year I won first prize for the best 2-year collection of butterflies and moths. On Easter Sunday this year I caught my first Mourning Cloak of the season.

Last year on a hot sunny afternoon (August 17th) I found Mourning Cloak caterpillars on willows and poplars at the edge of Rocky River. They were two inches long. They are black with red spots and spines. I put five of them in a glass jar with poplar and willow leaves and bare sticks.

The next day they were all eating. By late afternoon all had attached to sticks with fluid. They hung by their heads like J's. When the thread dried into a "button" they grabbed it with their rear legs and swung free. August 19th, they split the skin. They swung back and forth as if on a trapeze. Then the skin fell off and the pupa was left. Then it got a hard chrysalis.

August 27, the chrysalids swung back and forth. August 29, two Mourning Cloaks emerged. They looked little and squishy. They sat on their cocoons and spread their wings and pumped fluid into them. —*Tom Meree, Age 9, Ohio*

I have two pet toads in our cellar. For two years now they have kept the flies and spiders down. In winter they burrow in the ground to hibernate.

—*Mark Anderson, Age 6, New Hampshire*

I have started a new nature hobby, tracing and drawing wild animals. I also studied the article, "Life in an Old Hollow Log" in your April issue and I found these things missing: fox squirrel, poison ivy, worms and grubs, centipedes, snakes and weasels.—*Ricky Erway, Age 9, Wisconsin*

My hobby is collecting bones and trying to identify them. I have goat and cow skulls and I find a lot of cow ribs and spines. I live on a ranch. I also collect turtle and armadillo shells.

—*Julie Fischer, Age 9, Louisiana*

I started to collect rocks when I was three. I collected white rocks then. When I was five I collected fossils and other important rocks. Now I have over fifty rocks.—*Stephen Broker, Age 8, Washington*

My hobby is looking at fossils. On summer vacations my family and I are going to Minnesota and coming back through the Petrified Forest. The best place that I know of is Yellowstone Park.

—*Jay A. Mansen, Age 8, California*

My hobby is riding horses so I thought I would write a poem about them for you. And here it is:

Horses are really wonderful,
With all the things they can do,
Whether they are really quite old
Or whether they are really quite new!

—*Cathy Lindly, Age 10, South Dakota*

PLEASE NOTE: *Ranger Rick will not publish an issue during the month of September.*

a can full of wrigglers

by Vivian R. Worthington

"Ouch!" cried Eric Jones, waving his arms wildly. "These pesky mosquitoes!"

"Let's get out of here," said Susan.

As they ran into camp, their mother called, "Find any berries?"

"Only mosquitoes," puffed Eric.

"Why are they worse down there than up here?" Susan asked.

"Mosquitoes fly and feed mostly at night and rest during the day—unless they are disturbed," replied Mrs. Jones. "They suck juices from leaves and they like still, darkish water on which to lay their eggs."

"That explains it," said Eric. "The berry patch is next to the creek, where there are little pools with algae on top."

Susan looked surprised. "Mother just said they eat plant juices. I always thought they ate only blood."

Please turn the page

"Only the females are bloodthirsty," said Mr. Jones as he came out of the tent. "They also eat plant juices, but we think they need blood to produce eggs."

"That needle they have reminds me of the doctor giving shots," said Eric.

"It's a lot fancier than that," said Mr. Jones. "All you see is the outer tube. Inside are two long pointed needles, two long thin saws and two blunt probes. These form an inner tube through which blood may be sucked."

"No wonder mosquitoes hurt when they bite," exclaimed Susan.

"That isn't what hurts," said her father. "When the mosquito gives you the needle, it shoots saliva down the tube to keep the blood from clotting. In this saliva is a chemical which causes the swelling and hurting."

"Do you think we could find some eggs that mosquitoes have laid on water?" asked Susan. "Can they be seen?"

"Some kinds of mosquitoes lay a hundred or more eggs stuck together," her father replied. "They float like rafts on top of the water. You might see them as small dark spots about a quarter of an inch wide."

"Why don't we make our own mosquito pools?" suggested Eric. "We could fill paper cups with creek water, with algae in it, and put them by the creek."

"It just might work," said Mr. Jones. "But remember that white reflects light—which mosquitoes do not like."

"How about cans with a dark coating inside?" suggested Mrs. Jones.

Carefully the children set out cans of murky creek water in a shady spot by the creek. Next morning they could hardly wait to finish their breakfast.

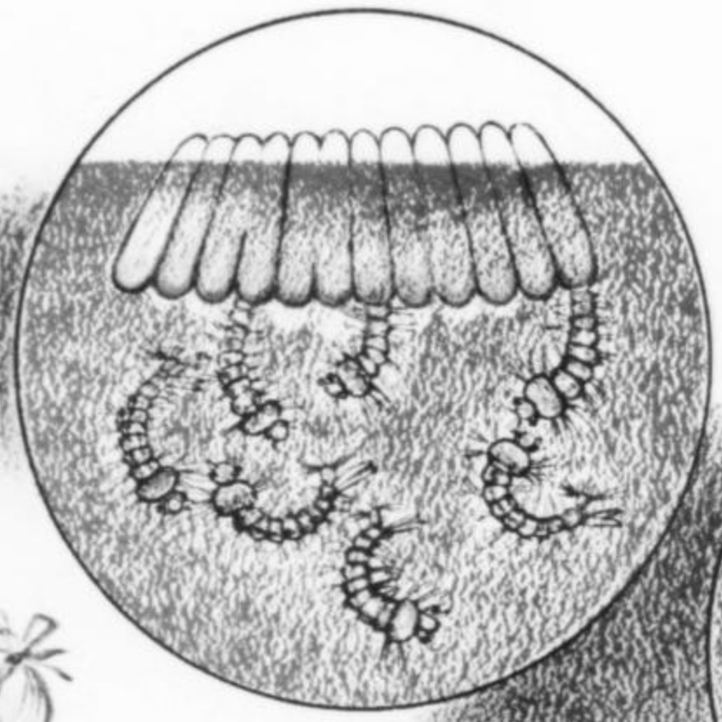
"Will we find eggs?" asked Susan.

"Maybe not the first morning," said Mr. Jones. "But don't give up."

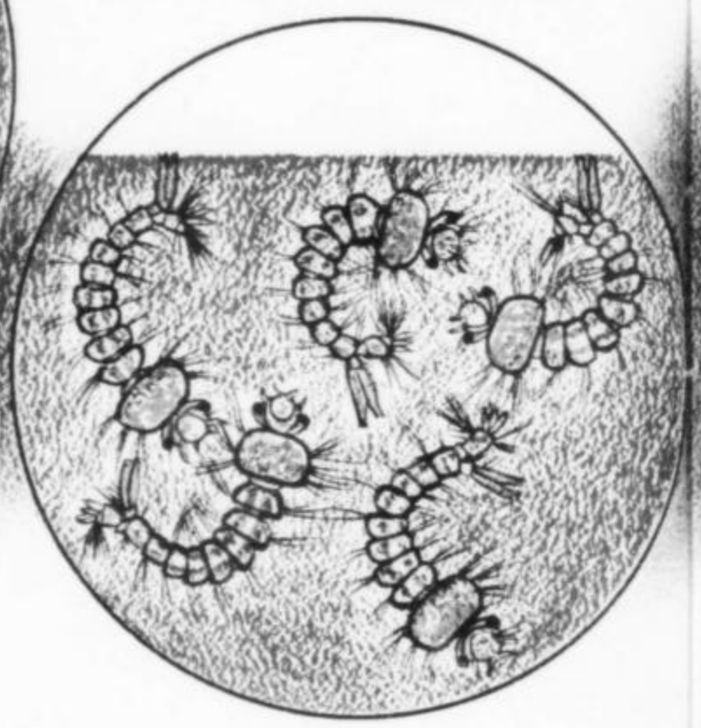
The children hurried off with their magnifying glass. Pretty soon Eric came running back. "Come see!" he shouted to his mother and father. Everybody agreed that the dark spots in the cans might indeed be mosquito eggs.

"How long before something happens?"

A mosquito's life begins as an egg laid on or near water with several hundred other eggs.



The egg hatches into a wriggly larva which grows quickly.



asked Susan eagerly.

"Seems to me I've heard that it takes more than a week from egg to mosquito. But the wrigglers will hatch sooner."

"What are wrigglers?" Susan broke in.

"Mosquito larvae. After hatching they swim about under water, or hang head down just below the surface. They breathe through little tubes in their tails which they poke up into the air."

Eric grinned. "Built-in snorkels."

"Which reminds me," said his father, "There is one more thing you can add to your experiment. Pour a little salad oil into one of the cans." When the children wanted to know why, he said, "Wait and see."

Several times each day Eric and Susan went down to the creek. On the third morning they came running back to camp with the cans.

"Wrigglers!" shouted Eric. But Susan said, "My can has nothing in it but OIL." She looked accusingly at her father.

"That makes your part of the experiment perfect," said Mr. Jones.

"I get it!" cried Eric. "Remember the snorkels, Susan?"

His sister's face lit up. "Could it be that the oil on the water kept the wrigglers from using their breathing tubes?"

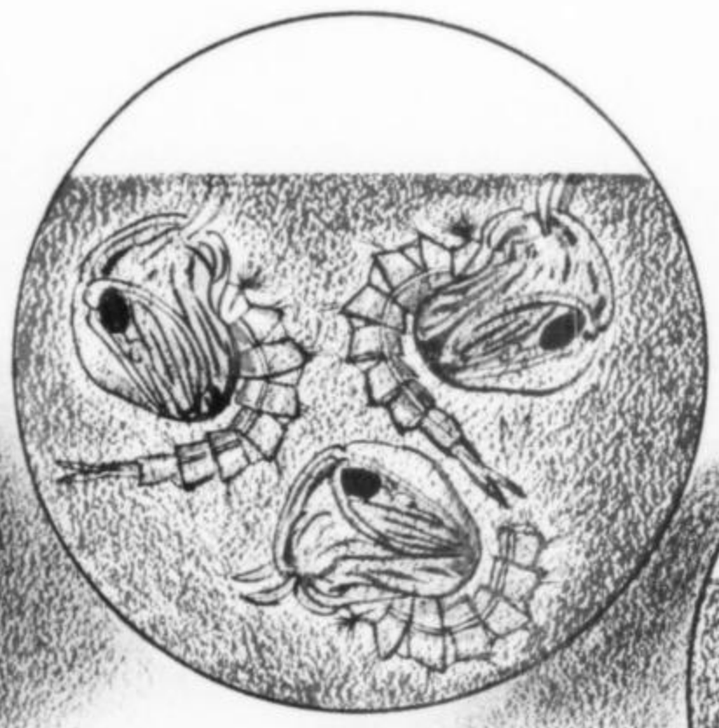
"Right you are!" said her father, and her mother added, "That's one simple way people control mosquitoes." She moved Eric's can into the sunlight where they could all see it better. There were too many of the strangely shaped, transparent little creatures to count—each no bigger than a pinhead.

The children wanted to know whether they would all turn into mosquitoes.

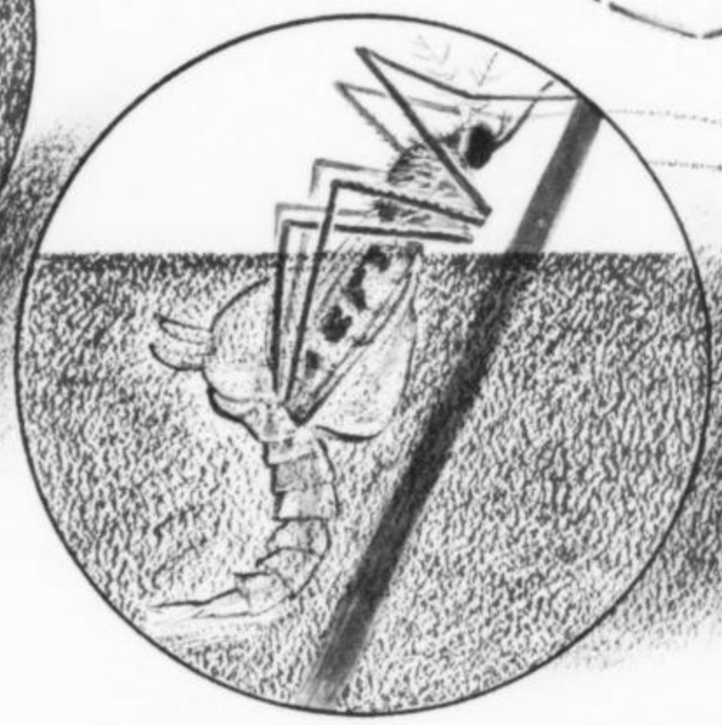
"They go through a pupal stage first," said Mr. Jones. "We'll see how long that takes. But while they are developing, many of them are eaten by fish, frogs and other insects."

"Hurray for fish and frogs and things!" cried Eric.

"I guess you're right," said Susan. "But they certainly are interesting. I'd like to take a can of wrigglers to school and learn more about them." *The End*

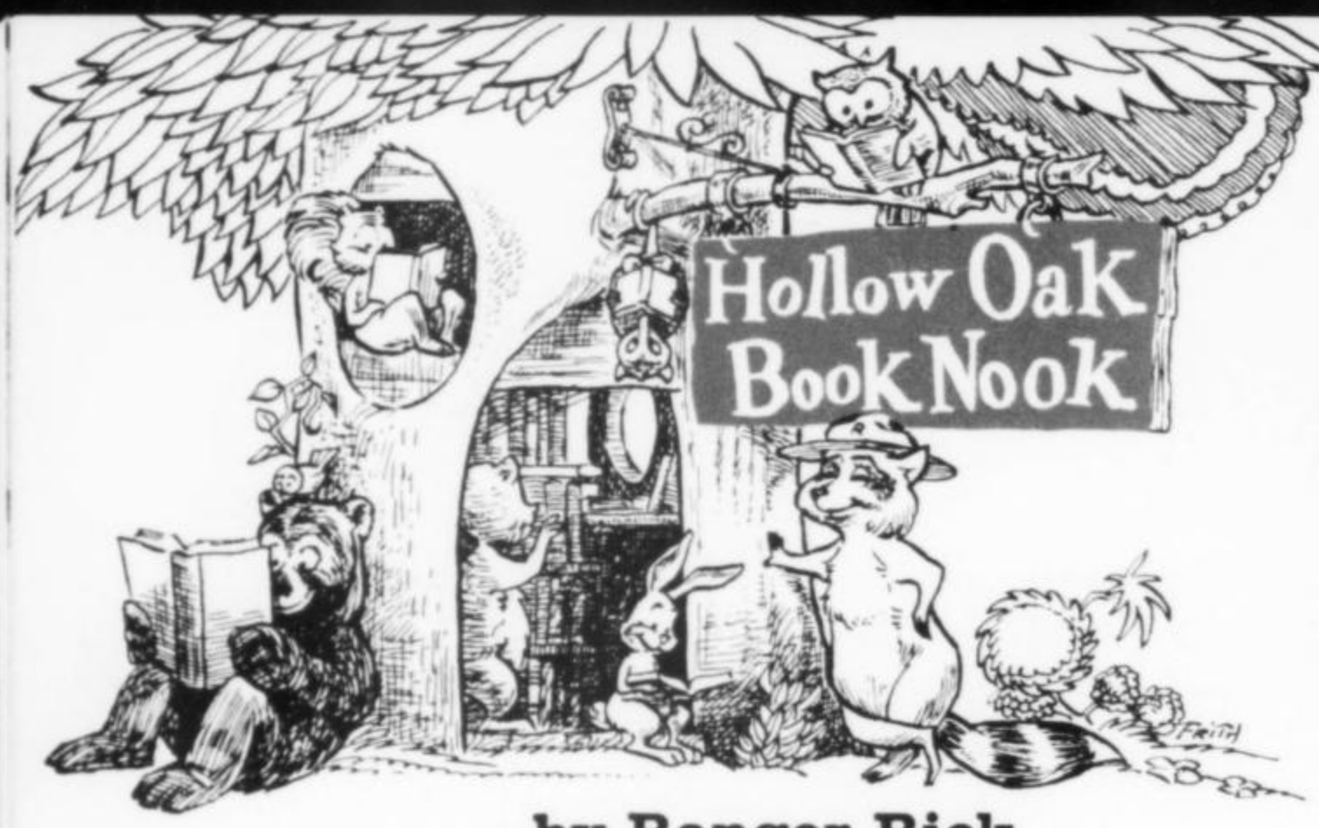


The larva becomes covered with a shell and passes the pupa stage.



It leaves the shell and becomes an adult mosquito.

Drawings by Cynthia Koehler



by Ranger Rick

Hi, Members!

What better time than summer vacation to read about the world of nature around us? I'm sure you'll enjoy the four books which I'm going to tell you about in our Hollow Oak Book Nook column this month. If you want to get any of them, just use the order blank attached to this page.

62220—Fish Do the Strangest Things

On page 10 of this issue, you found out all about "a fish that hitchhikes." If you were interested in this article, you're sure to enjoy a book called *Fish Do the Strangest Things* by Leonora and Arthur Hornblow. Among the other fish you learn about in this book are the archer fish, who can shoot a stream of water three feet in the air to catch bugs for his supper, the angler fish, who carries around his own lantern used as bait in catching other fish, and the African lung fish who can live out of water for years by wrapping himself up in a mud ball when the stream where he lives dries up in the hot African sun. And Michael Frith's delightful drawings make *Fish Do the Strangest Things* still more enjoyable.

62239—All About Dogs

Millions of years ago, when men lived in caves, a father brought home pups for his children. The animals kept the children clean by licking them. In the middle ages, dogs, side by side with gallant knights, wore armor into battle. You'll read about this and much, much more in *All About Dogs,* by Carl Burger. He explains how the dog has managed to survive wherever he found himself – the dogs of the arctic grew heavy coats to keep themselves warm, for example, and the dogs of the deserts of Arabia grew thick tufts of hair on their feet to protect them from the hot sands.

Illustrated with beautiful photographs and drawings by the author, *All About Dogs* will tell you everything you could want to know about "man's best friend."

62248—All About Horses

The first horses appeared on the earth long before man – fifty million years ago – and were no bigger than foxes. Marguerite Henry's wonderful book, *All About Horses,* takes you from these ancient beginnings through history with the horse, right up to today's thoroughbred racehorses. Illustrated with exciting action drawings and beautiful photographs, *All About Horses* talks about the best known of the more than sixty breeds of horses in the world today. You'll have the thrill and satisfaction of learning to recognize each one at a glance.

62257—The Surprising Kangaroos

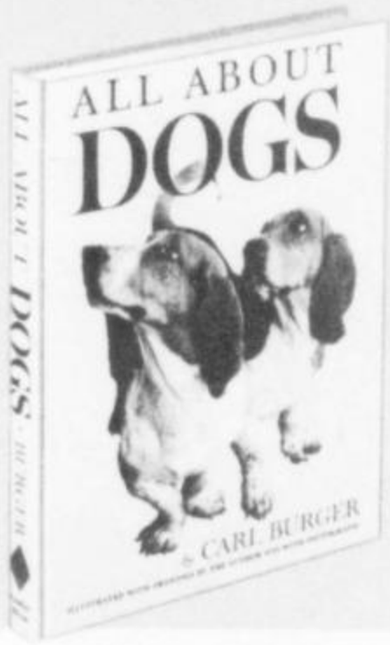
Everything about kangaroos is surprising – their name, their appearance, their way of traveling and of fighting, and especially their method of caring for their young.

Pouched mammals have always fascinated man, from early explorers to modern scientists. In *The Surprising Kangaroos,* Patricia Lauber tells the story of these fascinating animals and their many relatives, including the koala, wombat, banded anteater, Tasmanian wolf, and American opossum. And you'll be able to read this easy-to-understand book all by yourself!

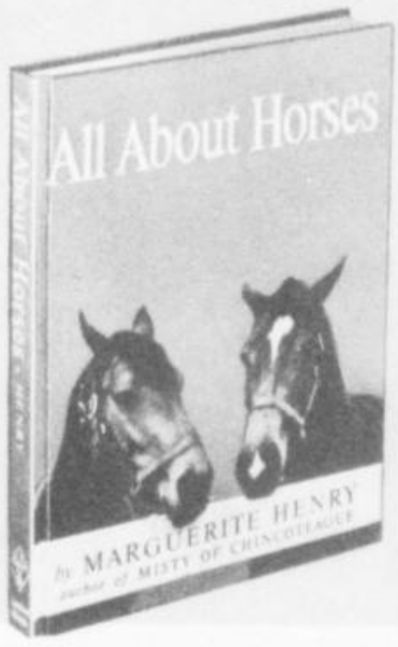
RANGER RICK

Hollow Oak Book Nook Selections for August

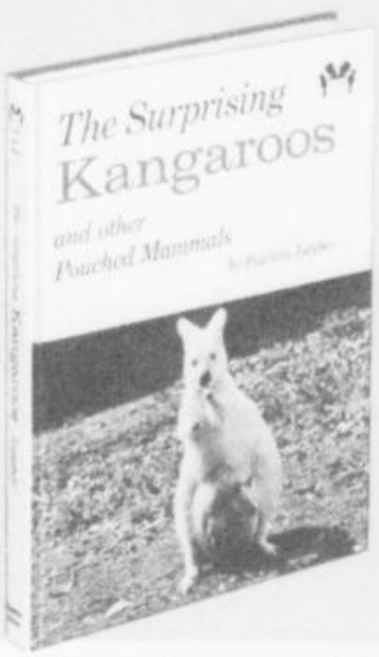
62220—**FISH DO THE STRANGEST THINGS**
by Leonora and Arthur Hornblow.
Illustrated by Michael K. Frith.
A "Step-Up Book" for 2nd and 3rd graders to read all by themselves.
(Pub. Ed. $1.95) **$1.60**



62239—**ALL ABOUT DOGS**
by Carl Burger.
Illustrated with drawings by the author and with photographs.
An "Allabout Book" for ages 8 and up.
(Pub. Ed. $1.95) **$1.60**



62248—**ALL ABOUT HORSES**
by Marguerite Henry.
Illustrated with drawings by Wesley Dennis and with photographs.
An "Allabout Book" for ages 8 and up.
(Pub. Ed. $1.95) **$1.60**



62257—**THE SURPRISING KANGAROOS**
by Patricia Lauber.
Illustrated with photographs.
A "Gateway Book" for children 8 and up to read all by themselves.
(Pub. Ed. $1.95) **$1.60**

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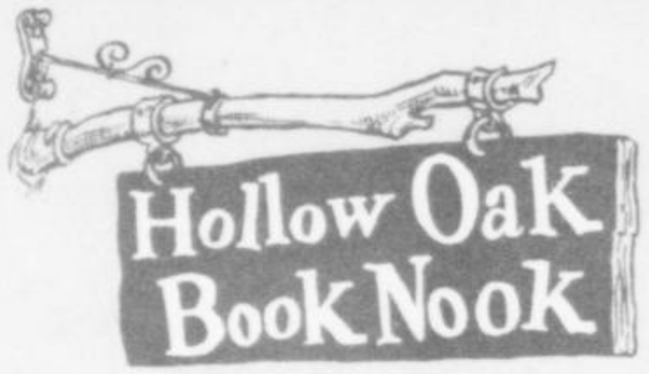

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Dear Member:
Please ask your parents to assist you in completing this form and preparing your payment.

Let's Collect Leaves

by Lee D. Salber

When you sit down at the breakfast table to have a bowl of cereal, I'll bet you don't have a bit of trouble telling the Corn Flakes from the Rice Krispies, or the Puffed Rice from the Cheerios. Do you know that each kind or species of tree produces leaves, twigs and nuts or fruits which are *different* and almost as easy to tell apart as the cereals?

One of the best ways to learn to tell the trees apart is to collect their leaves, twigs and nuts or fruits. This is the forester's secret for learning to identify trees. Besides, collecting is fun.

You might like to make a leaf collection like one on the next page. There are leaves of many different shapes and sizes. Some leaves, like those found on sweetgum trees, are star-shaped! Other leaves, like those on black willow trees, are long and narrow. Collect as many different shaped leaves as you can. Start with leaves from trees that are in your yard, a nearby park or in the woods.

Place the leaves between two pieces of wax paper and press with a warm iron. Cut the wax paper around the shape of the leaf leaving a little trim. Then place it on a sheet of thick paper or a piece of cardboard. Use small strips of tape to hold the leaf in place.

You may want to place all of your mounted leaves in a notebook or frame some of them with cardboard or wood. Then you can hang your collection in your room or den.

Don't forget to write the name of the tree on your leaf mount along with other interesting facts which you learn.

Some of you will also want to collect twigs and fruits. These items can be mounted on separate sheets of paper or on the same sheet with the leaf.

Please turn the page

OAK

There are some fruits, like acorns and hickory nuts, which are hard to mount on paper. These fruits should be fastened to a small box and labeled. An old cigar box or shoe box will be fine.

Some of you may be interested in photography. Why not take a photograph of each tree from which you collect a leaf,

QUAKING ASPEN

INTERESTING FACTS:
Leaves are almost round. Bark is pale greenish white. Grows in both East and West.

twig or fruit? Tape the photograph to your collection and it will help you remember what the tree looks like.

There are many things which you can learn from trees, even though they can't talk. Here are some questions you might want to think about when you are outside collecting. What does the bark on the tree look like? Where is the tree growing? Is it in a field or in a swamp? Is the tree large and old or is it a young tree? Are any animals making their homes in the

SUGAR MAPLE

INTERESTING FACTS
Sap runs in Spring. Maple syrup is made from sap. Seed pods are green in Spring and turn brown by Fall.

tree? Write these facts down on your collecting sheets so that you won't forget them. That's what real foresters do.

Look over the various kinds of collections shown and decide which one you would like to make. To get started you might look through some of the books on tree identification which can be found in your library such as *An Introduction to Trees* by John Kieran, Hanover House, Garden City, New York. *The End*

AMERICAN ELM

Ulmus americana

INTERESTING FACTS:

Very common tree in eastern United States. Leaves have jagged edges and are lop-sided at the bottom. Bark is gray with deep furrows, twigs are smooth. Trees are shaped like upside down feather dusters. Elm wood is very hard and is used to make furniture.

If you would like to make a more complete collection to put in your notebook, you may include the leaf, twig, fruit and a photograph of the tree along with interesting facts.

Did you ever wish it didn't take so long for seeds and bulbs to grow into flowers? If you're an impatient gardener, you need some *colchicum* (KAHL-chi-kum) bulbs. I planted one of these water lilies on a Labor Day and it bloomed just ten days later! August is the best time to plant them because it gives them a chance to grow some roots first.

Colchicums seem to do things backward. The flowers pop out in the fall without any leaves at all. After several weeks the flowers wilt away and only seeds are left. Nothing shows aboveground. Months later, in the spring, big clumps of bright green leaves appear. Last year's seeds are half hidden down in the base of these leaves. By the end of June the leaves turn brown and dry up.

Sometimes you can find an open pod of ripe seeds on the ground when you start looking in September for the flowers to show up again. If you didn't know the secret, you'd think the seeds came before the flowers.

These big bulbs are so eager to blossom that if you forget to plant them, they will flower right in the paper bag. They are harmful if eaten and they will die without a real place to grow roots. So it is much better to put them in the ground as soon as you buy them. You may purchase these from any store that sells bulbs such as garden supply or flower shops. Cover them with about three inches of soil. They will live and flower for many years. *The End*

Instant Flowers

Story and photos by Bebe Miles

One bulb of colchicum water lily makes a whole bouquet. This double-flowered hybrid produces no seed. It is often 4 or 5 inches across.

In spring colchicums develop tropical-looking leaves more than a foot high.

During your summer vacation months I hope you have enjoyed being outdoors. Have you seen a beautiful hummingbird like the one on the back cover of your magazine? Why don't you try putting out a feeder with sugar water in it in your backyard? It will attract these beautiful little birds and you can see how they hover like a helicopter.

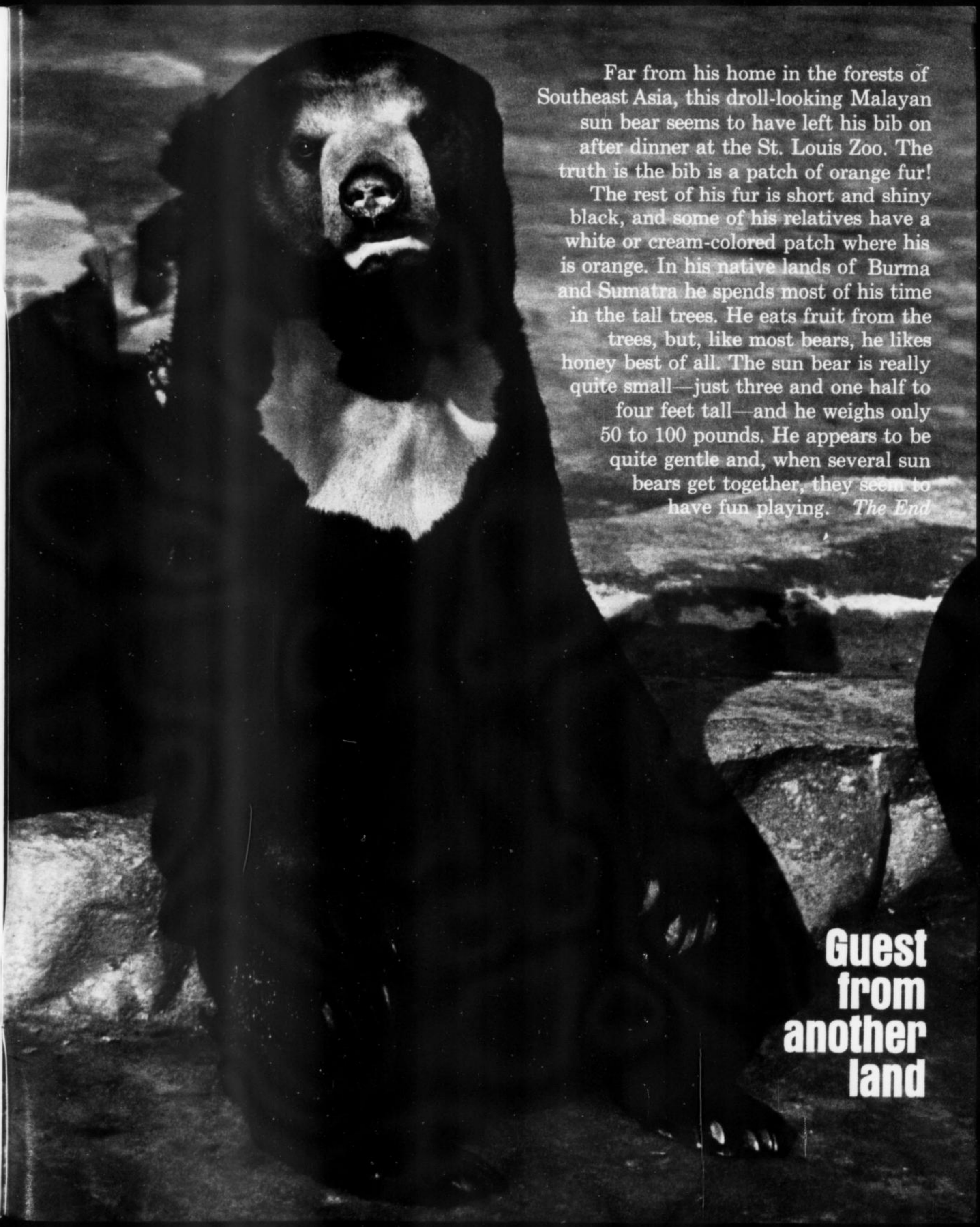
One of the most interesting nature collections for boys and girls to make is described on Page 41. When you are out walking in the woods, or in a city park or right on your own street you can start your leaf collection. Wouldn't it be interesting to keep a notebook of all the beautiful leaves you are seeing now? Then when school starts next month you can share them with your teacher and the other children in your class.

I was surprised to learn that sometimes the "busy beaver" isn't very busy at all, weren't you? He does many things which other animals can't do. Some of these he does while swimming around in the water. "Old Mr. Paddle-tail," on Page 4, tells lots of interesting things about beavers. You and your Mother or Dad might go hiking out in the country and look for a beaver valley where you can see a lodge and some beaver dams. If you would like to learn more about beavers there are lots of interesting books about them in your local library.

This copy of Ranger Rick's Nature Magazine is filled with interesting information and many beautiful pictures and several things that should be fun for you to do. Some of them should keep you busy all through this month and next. Remember, you won't receive any magazine in September, so until we talk things over again in October—have fun.

Miss Frances

Photo credits: Inside front cover of anemone by M. Woodbridge Williams; Inside back cover of Malayan sun bear by William R. Self and Jess Jordan, Jr.; Back cover of hummingbird by Ron Austing.



Guest from another land

Far from his home in the forests of Southeast Asia, this droll-looking Malayan sun bear seems to have left his bib on after dinner at the St. Louis Zoo. The truth is the bib is a patch of orange fur! The rest of his fur is short and shiny black, and some of his relatives have a white or cream-colored patch where his is orange. In his native lands of Burma and Sumatra he spends most of his time in the tall trees. He eats fruit from the trees, but, like most bears, he likes honey best of all. The sun bear is really quite small—just three and one half to four feet tall—and he weighs only 50 to 100 pounds. He appears to be quite gentle and, when several sun bears get together, they seem to have fun playing. *The End*